

Aviation News

McGRAW-HILL PUBLISHING COMPANY, INC.

OCT. 1, 1945



Ryan's Fireball Off Secret List: First plane to combine jet and reciprocating powerplants is this Navy fighter, demonstrated last week in Washington and San Diego, which already has secured an important place in Naval aviation. Ryan engineers are utilizing production experiences in developing other new planes. (Story on page 8.)

Warplane Buying Trends Indicate Industry Benefits

Navy seen ending its aircraft production program; buying agencies to get greater latitude in sponsoring research and development.....Page 7

Fireball Demonstrations Unveil Navy Jet Plane

Ryan fighter powered by first combination of jet and reciprocating units is highly maneuverable, fast climbing craft.....Page 8

Lightplane Market Trend Stresses Salesmanship

Aeronca and Piper adopt programs to improve selling techniques; special training courses set for distributors and dealers.....Page 14

RFC Surplus Air Plants Report Indicates Usage

Extent to which war-built aircraft facilities will continue exclusively aviation production left speculative.....Page 32

Shipping Firm Air Role Is Hawaiian Case Issue

Matson leads new argument against denial of steamship firm aviation operations; hearing also marked by pleas for added service.....Page 39

Dozen Domestic Airlines Boost Schedule Plans

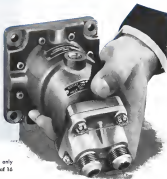
Service resumed at some points skipped during war; unfilled route authorizations get promise of early utilization.....Page 40

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THE AVIATION NEWS

Washington Observer



INDUSTRY-AAF MEETING—Both the aircraft manufacturing industry and the Army Air Force have been strangely silent on their joint meeting in Washington. While it was announced the problems facing the industry in the production and development of new types of aircraft, readjustment and disposal of surplus planes and equipment and other related matters would be discussed by industry leaders, General Arnold and other ranking officers, neither group has had any public announcement to make of the results of the conference. At a time when both are seeking sizeable programs, it seemed strange to many observers that the public was not let in on at least the outlines of the plans.

FOREIGN SURPLUSES—The proposal of Reconstruction Director Snyder to turn the disposal of foreign surplus over to the State Department, to be traded off in part for commercial and air transport concessions, is said to have caught the Department's aviation experts flatfooted. As yet, they have evolved no uniform policy for the disposal of costly air bases the Army has built around the world.

TOKEN PAYMENTS—There is said to be some sentiment in Washington for turning usable transport planes, which can not be disposed of in any other way, over to the hard-pressed smaller nations in Europe, and China for token payments. There is said to be a number of planes, however, if any of these planes were to be used in competition with U. S. airlines on international routes. It would also draw present prices for such equipment, particularly those who have cargo rights in these countries. Action on this should be watched for word in Washington thinking.

MILITARY TRANSPORTS—The disposition of hundreds of millions of dollars worth of military air transports, incidentally, is becoming more and more involved. Both domestic and foreign military take the view that since all of this equipment already is, or soon will be, obsolete and they are more interested in acquiring only a limited number of planes for the present emergency, and only then under attractive terms.

DISPERSAL—Begging warbling black in the way of speedy disappearance of post-war military aircraft procurement policies is dispersal. Army is greatly worried about possibilities of future atomic bombing and is exerting all influence to persuade manufacturers to assist the wartime subcontracting system. Industry's objection centers on cost of subcontracting in view of lesser volume production expected.

INDUSTRY-WIDE—Agreement between the aircraft industry and the AAF can be expected on the subcontract phase of the problem. But that will still leave the greatest headache: the fact that it is too possible to disperse only one industry. To achieve AAF's full dispersal objective, it is pointed out, would mean a complete readjustment of the nation's industry and economy.

NO BARGAIN SALES—New price scales for surplus PTs, BTs and Cessnas (Airmotive News, Sept. 17) are not expected to be drastically under existing prices. Revised scales were still being discussed at Reconstruction Finance Corporation last week, but indications were that present ceilings would be kept, with floors lowered on some models in less demand.



Modified into a two-place, radar-equipped night-fighter, this just-received P-38 Lightning, bearing the version designation "M", carries a radar operator under a plexiglass dome behind the pilot.

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Editorial Headquarters,
1111 N. 1st St., Ave. A, New York 17, N.Y.
1111 N. 1st St., Ave. A, New York 17, N.Y.
1111 N. 1st St., Ave. A, New York 17, N.Y.

Published weekly by National Business Publications Mailers' Association, Inc., 1111 N. 1st St., Ave. A, New York 17, N.Y.
1111 N. 1st St., Ave. A, New York 17, N.Y.
1111 N. 1st St., Ave. A, New York 17, N.Y.
1111 N. 1st St., Ave. A, New York 17, N.Y.

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News at Deadline

New Part 04

Setting speed requirements for planes in the transport category have been eliminated by CAB in a new Part 04 of Civil Air Regulations. Instead of previous requirements in this respect, the Board favors other limitations imposed by aircraft handling qualification and performance, particularly those of climb and airport area. Accordingly, CAB has set new rules of climb that follow CAA recommendations. Main effect of this new Part 04 will be to make new aircraft such as Boeing's C-97 and Convair's Model 37 commercial contenders (AVIATION NEWS, Sept. 17).

New Martin Plane

A new passenger-cargo plane designed for short hauls on low traffic density routes has been announced by the Glenn L. Martin Co. It will carry 16 passengers, weigh 35,000 pounds, is a low-wing, twin-engine monoplane design of all metal construction, full cantilever wing and tail surfaces, semi-monocoque fuselage and fully retractable tricycle landing gear. It is to be powered by 1825 Wright Cyclone engines. Wings, landing gear, tail surfaces and most of the fuselage will be identical and interchangeable with Martin's reversely arranged Model 383 transport, which has passenger capacity of 32, is designed for medium distance and high density traffic runs. The new Model 328 has a maximum turning radius of 60 feet and lands at approximately 70 miles per hour.

Sommers Resigning

Another in the series of recent shifts in CAA executive personnel was disclosed late last week, when it became known that John E. Sommers, chief of aircraft control, and former deputy administrator during the Reagan administration is resigning. It is understood that Sommers had been offered a foreign post in Germany with CAA, which he had refused, and that he was told there was no other assignment for him. Still other CAA changes are expected to be forthcoming soon.



Industry Observer

Douglas is planning a new, long-range version of its DC-6 with four engines and counter-rotating propellers at both ends and tail. Medium-range version under construction has dual-driven propellers at the rear and two Allison engines in the fuselage. Douglas believes that installation of two more engines and additional propellers in the nose will permit economical overseas operation with the new 34-passenger load. Two other versions in which Winghouse jet units would be added to increase speed also are under consideration as modifications of the present two-engine and projected four-engine models.

Winghouse aircraft since Sept. 1 has been producing two C-46s a day each five day week. Company is completing about 70 C-46s which were on the line when the war ended commercial production.

CAB's Economic Bureau will organize an aviation division shortly to handle matters involving interlocking relationships, stock ownership reports, airline contracts and agreements. Edward A. Bolger is expected to be its head. He was chief of Aircraft Planning Branch of WPB, was in command with Bureau of the Budget for five years, and ended war with SEC.

Members of Air Transport Association have called a joint meeting of advertising and publicity committees to discuss 1946 advertising plans of both the airline industry and various individual members. There is doubt whether the aircraft manufacturing industry will contribute financially to the extent of previous ATA campaign. An industry educational program will be discussed.

Howard Hughes has not abandoned hope of obtaining \$2,000,000 for moving his giant flying boat to water and putting it through test flights again. Company officials report failure to explode only in the boat's construction due to the basic \$10,000,000 contract was for construction of the prototype at Culver City. Costs of moving the craft to Los Angeles harbor, out flight expense, and about a million dollars for moving and test flight insurance premiums were not dealt with in the contract.

Boeing-Wheeler has backed up a last-place, low wing monoplane for the present freight market but officials admit if the project is continued Principal objection is production costs. As 1946 phase a year, sales price would be at least \$7500 to \$8000. The plant will produce Boeing's two-engine, high-wing, 20-passenger transport, however. Maximum payload of the new Model 417, planned for feeder services, is announced as 6,000-lbs., maximum speed 245 mph, cruising 200, range 1,000 miles. Tricycle gear will retract fully and the fuselage. Too-tile operating cost will be 10-12 cents. The plant is still at work on C-97 and military Superfortress.

New York cables involve reduction of Grumman Hellcats to 735 at 55 a month, Grumman F7E program to 360 planes at 14 a month, and Chance-Vought F4U-4 contract to 492 at 21 a month. Martin's P3M-3 total was cut to 110 planes, at 3 a month.

Prospect for Hamilton Standard Propellers for the Navy is for an increase from the present 75 propellers a month to 125 by March and 200 a month after analysis to June 1947.

Lake American Airlines, United has requested 50 surplus Douglas C-54s from government officials. American plan is to use a number of these planes for all-cargo operations.

Charles Bobb's Glendale, Cal., company is modifying a Lockheed L-1049 for top executives of Time and Life magazines at a reported cost of \$150,000. It will be one of the most elaborate executive planes yet delivered.

Being Aircraft officials have been told by Ted Law, president of Alaskan Airlines, that he contemplates purchase of Superfortresses for service between Seattle and Anchorage if route applications are approved.

Needed in a Sky Strong Nation



In cooperation with John Q. Citizens, American Business and the Aircraft Industry, Government, too, has a major role to play in making the United States a great peace-time Air Power, just as it built a great war-time Air Power. But the responsibility of maintaining National Security and Permanent Peace by means of a highly developed aviation system rests not alone with our Federal Government. Every state and municipality has a co-operative job to do.

Already many plans are under way for perfecting airport facilities and equipment, building state and municipal highways to facilitate quicker and more convenient transportation to and from air fields, developing international air transportation, setting up training programs and the study of aerodynamics in our school systems, creating commissions charged with preparing aviation wisely and for the benefit of all, and formulating laws and regulations to make the flying the safest of all roads to travel.

These are important programs. Effective promotion of them at all levels of Government can be a major contribution to the welfare and security of our air-minded Nation.

We at Bell Aircraft, as part of the Aviation Industry, pledge ourselves to

continue the research and scientific advancements which have produced many of our outstanding and victorious air weapons, in order to make the airplane an obedient servant in time of peace as it has been a defender of World Freedom in time of war.

VOLUME 6 - NUMBER 30

Aviation News
McGraw-Hill Publishing Co., Inc.

Oct. 3, 1945

Warplane Procurement Trends Indicate New Industry Benefits

Navy seen ending its aircraft production program; buying agencies to get greater latitude in sponsoring research and development; cost-plus-fair basis believed peacetime policy; Army plans ready for Congress.

By WILLIAM KROGER

The involved question of post-war aircraft procurement policy for the Army and Navy is slowly being resolved, with indications that the aircraft industry in some respects will be accorded more sympathetic treatment than before the war.

Peace policies are still in process of formulation, with the Army's program expected to be sent to Congress this month. However, it is possible to discern some trends in current thinking:

1. The Navy will discontinue the manufacture of aircraft and engines, conducted on a small scale prior to the war in accord with provisions of the Vinson-Trammell Act.

2. Both that statute, and the Air Corps Act of 1936, as amended, will be revised to give procurement agencies greater latitude in sponsoring industry research and development.

3. Research and development contracts will be given on a cost-plus-fair basis, although possibly not under that label, with a more careful preponderance of costs than heretofore.

4. The Army, and presumably the Navy, will press for dispersal of manufacturing establishments, with changes made that an underground factory will be constructed and operated experimentally.

Representatives of the aircraft industry and the Army procurement officers met last week at Wright Field to go over the critical subject. From the discussion was expected to emerge Army recommendations that will go to Congress.

It is believed that one of the principal proposals will be for

further amendments to the Air Corps Act of 1936, which controlled all Army aircraft purchasing until the war. The President, under his war powers, suspended operation of the statute and permitted the ACP to let contracts by negotiation, rather than by adherence to the competitive bid provisions of the act.

Industry Correlators - Workmen in the act that the industry would like to have corrected chiefly concern the type of contract and the quantity involved in experimental and development programs. The statute is in force because of the discretion of the Secretary of War and Navy the terms of purchase.

The industry would like to tie this down to a type of CPFF contract. However, it is felt that the wartime CPFF contract has not been too well received in some quarters. Further, General Accounting Office's requirements as to cost justification under wartime CPFF contracts have become increasingly restrictive. The great time lag before GAO makes its audits is also worrisome.

Consequently, the industry would like to see written into the act of 1936 the type of contract, preferably a cost-plus-fair agreement, and a definite delineation of allowable costs by the Internal Revenue Bureau. Also looked upon with favor is the form of incentive contract used by the Navy in which a target price is set and the government pays up to 35 percent of the contractor's costs in excess of the target.

5. Prototype Practice - Under the Air Corps Act, the cabinet officers seemingly were permitted to

order experimental planes in any quantity, but in practice, the applicable section of the law was always interpreted by GAO as limiting procurement to the prototype. The industry has submitted a proposed revision of this section.

In presenting some of its post-war recommendations to the House Naval Affairs Committee, the Navy related the industry for its wartime job while revealing it intended to close its Philadelphia manufacturing plant. That facility was established to attach a yardstick to aid Navy in checking with aircraft producers.

Assistant Secretary for Air John L. Sullivan stated, "The aircraft industry has reached such a stage of competitive development that such a yardstick is no longer required." Further, declared Rep. Carl Vinson (D-Ga.), chairman of the committee, and co-sponsor of the act, planned cost be produced cheaper by private industry than by the government factory.

Navy's plans, as explained by Assistant Secretary H. Struve Herold, involved approximately 12,000 planes, 8,000 of which would be in active duty status. Procurement up to July, 1947, will be small, 2,000 new aircraft.

Turbine Tunnel

The Massachusetts Institute of Technology is constructing a new laboratory with a super-sound wind tunnel and facilities for research in gas turbine.

Dr. Jerome C. Hunsaker, head of the department of aeronautics and astronautical engineering and also chairman of NACA, said gas turbines give evidence of being the next step in the evolution of power plants, comparable as an effort on technology to that of the steam turbine of the turn of the century. Studies to be taken up at the new MIT laboratory will include the elements of compressors and combustion devices.

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Fireball Flight Demonstrations Officially Unveil Navy Jet Plane

Ryan fighter powered by first combination of jet and reciprocating units to answer naval need for highly maneuverable, fast climbing craft; shortest turning radius of any comparably fast plane claimed.

By SCOTT HERSEY

The Navy has finally taken the wraps off its first fighter plane to use jet propulsion—Ryan Aero-nautica's PR Fireball—which was put through its paces at simultaneous demonstrations in Washington and San Diego.

The new plane, conventional in appearance, is the first to combine jet and reciprocating powerplants (Aviation News, Sept. 17), and its manufacture and flight performance has already been translated into an improved Fireball design as well as utilized in developing other new planes.

▲Alfalfa Range.—The unique power combination—Wright Cyclone radial engine in the front and a General Electric jet propulsion engine in the rear—makes it equally efficient at high or low levels.

The Fireball was an answer to the Navy's need for a highly maneuverable, fast-climbing plane and is reported to have the shortest turning radius of comparable speeds of any modern fighter. Maximum performance is obtained when the two engines are used in combination, but it can be operated on either the conventional or jet engine independently.

At first glance it appears to be a single-engine airplane, a conventional, low-wing, single seat monoplane with a tricycle landing gear. The air intakes for the jet unit are in the leading edge of the wing near the fuselage. The jet unit itself is installed in the after section of the fuselage with the jet exhaust opening coming out under the tail.

►Streamlining.—The Fireball is completely flush-riveted on all exterior surfaces and has all-metal control surfaces. Both engines are completely enclosed, and all air intakes for the forward engine are within the engine cowling.

Because of the more even distribution of the weight longitudinally—with an engine at each end—the airplane's photo-canopied cockpit is installed slightly forward

ward of the leading edges of the wings permitting a great range of vision.

The canopy is made of milled, transparent plastic and is shaped like a short tapered wing turned an end.

►Pilot Facilities.—Interior of the cockpit is compact, yet roomy. An oxygen system for high flying and equipment to service the pilot's anti-blackout suit—necessary to make full use of the short turning radius and sharp pull-ups possible with the PR—are provided. The instrument panel is equipped with subdued red lighting for night flying.

Not only does the new Ryan plane have the lighter weight of a single-engine craft, but if one of its powerplants is knocked out it can continue to fly without the pilot having to counteract the swing which follows the loss of power from one engine in a two-engine aircraft. Result is a marked safety margin over a single-engine fighter and also an advantage

'Coast' Air Voice

Mayors of seven major West Coast cities have wired President Truman and Secretary of Commerce Wallace asking western representation on the Civil Aeronautics Board and in the Civil Aeronautics Administration. The request followed sessions held in San Francisco to study Pacific Coast post-war problems.

After pointing out that no resident of any state west of the Hudson Mountains had served on the board, the message stated that "considering the undeniable coastal development of commercial aviation in the San-San Pacific Ocean area, Pacific Coast representation on the CAB and CAA becomes mandatory."

►Signatures.—The telegram was signed by mayors of Seattle, Tacoma, Portland, San Francisco, Oakland, Los Angeles and San Diego.

over conventional two-engine arrangements.

Rated at 1,330 horsepower, the Wright Cyclone Model R-3400 engine can be boosted by water injection. As it is contained on back, it makes possible a range of 1,500 miles, with disposable tanks, cruising at 305-mph.

At full throttle, the front engine alone gives the Fireball a speed of 320-mph. The engine drives a Curtiss Electric full feathering, three-blade constant speed propeller.

The General Electric thermal jet engine alone will drive the Fireball at approximately 300-mph. Like all jet engines, its efficiency increases with speed. Once speed has been reached, all jet planes lack full combat effectiveness, according to Ryan engineers, and that explains the premier of the Fireball combination of conventional engine with jet.

Rockets may be carried under either wing, or two 1,000-lb. bombs.

The Fireball never saw combat, but the first Navy fighter squadron to be equipped with the PR-1 was VF-98, which had actually started its pre-combat training period prior to the surrender of the Japanese.

AIA Council Slates Varied Air Topics

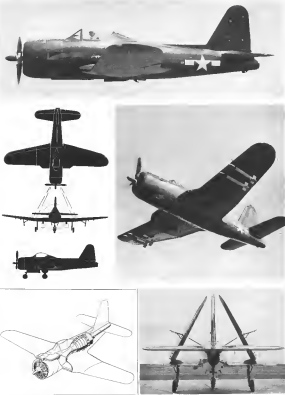
Discussions of aviation insurance, distribution of aircraft parts and accessories, exporting problems and flying safety are on the program for the two-day meeting of the General Aircraft Council of the Aircraft Industries Association, Oct. 1 and 2 at the Washington Statler Hotel.

In addition to representatives of the 19 aircraft manufacturer members of the council, participants in the discussions will include representatives of the Aviation Distributors and Manufacturers Association, aviation insurance representatives, staff officers of the Army Air Forces Office of Flying Safety, representatives of the Automotive Safety Foundation, National Safety Council and CAA safety regulation division.

Among problems of exporting personal aircraft to be studied will be advertising of export products and the problems and cost involved in flight testing new aircraft for export, which later must be disassembled and packed.

Navy's Fireball Blazes New Power Path

Features first jet and reciprocating engine combination



New RFC Sale Drive Shapes As Procedure Is Reorganized

Agency reveals 10-date aircraft disposal analysis and listing as dwindling market and growing inventories force action to unload surplus stockpile; next three months called critical.

Anticipating the most critical period in surplus aircraft disposal, Reconstruction Finance Corp. is overhauling its sales system in preparation for an intensified marketing drive.

Already, RFC has granted discounts to dealers who purchase three or more surplus planes (AVIATION NEWS, Sept. 17), in tackling the conspicuous problem with a new agency agreement, and is fighting for more skilled personnel.

Crazing Change—The problem changed completely on VJ Day, according to Surplus Administrator S. J. Symington. Before that, generally speaking, there were more buyers than merchandise. Within 90 days of Japan's surrender, Symington believes, great-

est sales efforts must be made to volume disposal as to be achieved.

In this period, inventories of surplus aircraft are due to rise sharply, while indications are strong that the market is disappearing.

With the wartime phase of surplus disposal ended, figures as of Aug. 15, the day after Japan's surrender, show that RFC aircraft sales, totaling 8,919 planes, were 33 percent of the 26,821 planes declared surplus and remaining to be sold after 1,947 planes were turned back to Army and Navy for salvage.

Low Return—However, the \$94,538,125 cost of the planes represented only five percent of the value of inventories—\$2,060,010,196. The 1,919 planes sold for

School Sales

Sales of surplus aircraft to schools under RFC's educational program have placed 109 planes at a total price of \$4,971 as of Aug. 15. Original cost of these planes was \$218,024. In the group were 13 fighters, three heavy bombers, and one light bomber, primary trainer, light bomber and medium bomber. Since Aug. 10, the University of Southern California has placed the largest order, for a B-17, B-25, P-50, P-47, and P-42, at a total price of \$3,325.

To the offer of planes to civic groups for memorial purposes, RFC has two responses, one of which is quite upsetting. Memphis, Tenn., wants the *Second Flying Fortress Memphis Belle*. The Army can't find it.

\$18,671,355, which was more than 19 percent of their cost.

All of the planes sold were bombers, trainer or transport types. As of August 15, there were no sales of combat planes listed. RFC sources consider that a yield of nearly 25 percent of original cost on the planes sold is satisfactory. Majority of planes declared surplus have been non-combat types, with the bulk of these being the easily-salable liaison and primary trainer types. Now, however, it is expected that most of the planes becoming surplus will be relatively unmarketable combat craft.

Type Factor—On the other hand, liaison, trainer and transport types declared surplus as of Aug. 15 totaled \$9,221. After salvage deductions, RFC had on sale \$5,044, valued at \$974,328,359. The 6,919 planes sold was 59 percent of the number, and 14 percent of the value.

Drainage down the sales record were some 15,463 B7's and AT's costing \$264,903,557. Total sales of the two types were only 123, for \$598,488. Now, RFC has the remainder classified as "possibly not salable."

The best record, of course, has been made with P7's and liaison, particularly the latter, with 91 percent of all declared surplus being sold. Of the 3,315 P7's, 45 percent, or 1,491, have been sold for \$4,422,666, which is about 19 percent of original cost.

Up and Down—There was a quiet in liaison sales in the 15-

day period ending Aug. 15, with 185 being sold, as against 31 in the period from July 15 to July 31. This reduced RFC's stock of liaison planes to 239 on Aug. 15. PT sales slumped in the same period, 313 being sold from July 15 to July 31, but only 146 being disposed of in the next two weeks. This left 5,025 in RFC hands.

Five liaison planes remain to be declared surplus, it is believed, while there are thousands of P7's that will pass to RFC for disposal in forthcoming months. This will compress the present backlog that consists of untold thousands of P7's, B7's and the ever-growing number of combat types.

In the transport category, the weakest spot is C-47's and C-54's, classified as light transports. Of these, 450 had been sold on Aug. 15, leaving a balance of 2,314. Little difficulty is expected in selling the C-47's, because of 307 medium transports, DC-3's, and Lodestars, remaining after a total sale of 124 of these types.

Northrop Post-War Programs Outlined

Large commercial flying wing due to follow military model near, engine works to concentrate on new turbo-jet.

The trend of the post-war program at Northrop Aircraft has been given by LeMotte T. Colm, chairman of the board and general manager, who, while reluctant to go into detail, indicated that:

Flight—It may be assumed that after test flights of the company's big B-35 flying wing bomber, due to be made in the next few weeks, Northrop may begin work on designs for a 106-200,000 pounds gross weight commercial wing.

The company's Northrop-Hendy engine works will get up and to the commercial development of an original propeller-jet turbine engine, which has been running under the wraps of military secrecy.

Foundry—A recently-purchased Los Angeles foundry will expand the manufacture of other-than-aircraft light metal products for consumer markets.

Experimental—military aircraft designs will be continued to the point of appropriations determined by governmental policy.

Production—of Northrop-designed artificial limbs for war veterans will be developed without attempting to realize any approx-



"DOUBLE" MUSTANG XP-82

imate profit on the venture. Colm and friends that the post-war competitive situation preordained entrance in discussing in detail the extent of plans for aircraft and engine designing and production, and added that many of his company's projects will be under military secrecy restrictions.

Northrop's financial position, he said, is excellent.

Deliber Backlog—The company sits low, after all cutbacks to date, a \$51,000,000 backlog of orders which will keep assembly lines busy for two years.

"More than half of this is for new models designed to offset air weapons losses in Germany," he declared.

Black Widow night fighter production, now ending, will be replaced in January by production of a new military plane still under military restrictions.

Foundry Profit—Northrop's foundry enterprise, already in operation at Northrop-Guinea, Inc., shows promise of substantial profits as well as of providing an outlet for Northrop engineers' talents. Already the company shows an order volume of \$120,000 a month based on the manufacture of aluminum band tracks and aircraft children's wagons.

Constitution Test

Lockheed's 184,000 pound Constitution, to be powered initially with four Pratt & Whitney Wasp Major engines, may be expected to test hop at Burbank, Calif., next March. Hopes that it would fly in December were premature.

While Lockheed is quiet on the question, it is believed to be reasonably certain that after the Navy accepts the prototype, converted versions will carry a price tag of approximately \$500,000 for a transport to cruise at around 280-mph, carry 135 passengers in a four-seater day version and 119 in a sleeper model. A crew of 11 is planned for the airplane.

Deliber Lead—Lockheed's announcement last week that it holds conditional contracts for delivery of \$45,000,000 worth of Lockheed Bellanca and Constitution supports a rumor that the big transport has attracted considerable interest. Most interested, judging from groups which have been allowed to the construction bingie are the Navy, American Airlines, Royal Dutch Airlines (KLM) and TWA.



LATEST NAZI JET REVEALATIONS

Pictured for the first time is the tremendously high-speed Arado 236C experimental jet fighter-bomber (above) which is said to have done 470-mph at altitudes up to 26,000-ft. during tests at the Wandorf airfield. Below, is the fighter prototype, Arado 234, which preceded the bomber version and which was powered by only two jet units. The 234C, with four BMW jets, is shown being loaded on the pitheissable wheel assembly used for takeoff; one visible are the wheel fully retractable landing slide which made up its fixed landing gear. The fighter version used conventional tricycle landing gear. Fitted with a fully pressurized cabin, the 236C carries a 6,480-lb. bomb fitted into its nose undercarriage. Armament is two rear and two forward firing machine guns.



New Lightplane Market Trend Emphasizes Modern Salesmanship

Aerona and Piper adopt programs to improve selling techniques; special training courses set for distributors and dealers; product's presentation called key to increased sales, improved public reaction.

By ALEXANDER MCGURELY

Adoption by two of the pre-war "big three" lightplane manufacturers—Piper and Aerona—of special sales training programs for their dealers and distributors, indicates a new trend in scientific marketing of personal aircraft which may result in increased sales and better public reaction to private flying.

Lynn Hollinger, Harvard aviation research expert, predicted in a recent analysis that the lightplane manufacturers with an intelligent aggressive sales program were likely to outsell other companies which might have superior products but which failed in presenting them to the public.

Pioneer Course—The Aerona and Piper sales courses have been developed by the Aviation Institute of Professional Sales Training, Chicago, an affiliate of Aerona Associates. The courses, which are in many respects similar, have been adapted from the General Sales Training Course, well known to other industries.

Designed as a 24 week correspondence course with three major sub-courses, emphasizing the sales interview, dramatizing the sales interview, and developing sales

personality, the courses involve salesman participation through solution of problems involving principles outlined in the texts.

While the course is being provided basically for the sale of airplanes its principles of salesmanship are equally applicable to any other products, accessories or services, which the airport operators and dealers may have to merchandise to the public.

New Standards—Both Piper and Aerona point out that previous aviation sales training has been confined largely to instructing dealers about the planes, while little attention has been paid to approaching prospects, conducting intelligent interviews, interpreting the merchandise in terms of value to the prospect and closing the sale.

In addition to the correspondence course training, personal sales training sessions are planned by the two manufacturers with groups of their dealers and distributors.

Prior to offering the course to its dealers and distributors 18 members of the Piper sales and management staff tested it.

Course Start—The courses are

designed to specific needs of the individual companies through special sets of "tailor-made" questionnaires which accompany each of the 24 weekly lessons.

The new trend toward more scientific methods of selling personal planes is seen as a parallel to the highly developed sales positions which have been used by automobile dealers and distributors over a period of many years.

These sales programs have been responsible for a major part of the expansion of the family car market in this country to a point where immediately before the war 52,000,000 people in 15,000,000 automobiles spent \$3,800,000,000 annually touring the country, and more than 100,000 establishments as such as dealers, repair shops and gasoline stations did an annual business of \$3,800,000,000 with motor vehicle owners.

Importance—While not even the most optimistic aviation market analyst would suggest that the personal plane volume will swell to anything approaching the automobile volume for years to come, the basic principles of salesmanship, if applied properly to personal plane marketing, undoubtedly will mean an important increase in total sales.



FIRST PRODUCTION LINES:

Assembly lines are forming at many lightplane factories, as the first of the post-war production planes begin to roll out the factory doors, to eager dealers and distributors. Above: First picture of the shiny, new, all-metal Globe Swift shows air of the planes in various stages of completion on the line at the Ft. Worth Globe plant. Left: First Taylorcraft model to go into production is the Two-seater shown on the line at Taylorcraft, Allamore, Ohio.

Airpark Cancelled

Failure to obtain "suitable equipment" for the proposed St. Louis Forest Park airport redevelopment was blamed by Clarence B. Moore, director of the project, for the cancellation of the project last week.

The airport was to have been operated Oct. 1 to Nov. 30 as a demonstration of the feasibility of operating small airports for personal planes near metropolitan business centers. The project was sponsored by a group of St. Louis members of the National Aviation Trades Association, and had been endorsed by the national organization.

Try Again—Moore and he would apply for a renewal of the city's permit to use the municipally-owned area for a similar project next spring when he hoped equipment would be available.

Airports Adopting Business Principles

New Memphis project typifies trend of lightplane dealers entering fixed base field with customer-orientation.

A growing trend away from the creation of shabby private flying airports similar to the "shabby and shanty" bases that abounded before the war, is seen in the rising number of lightplane dealers entering the airport field with an eye sharpened particularly toward attractions that will "sell" and not just be tolerated.

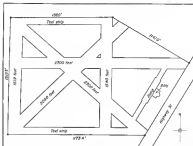
Typical of the businessmen entering the field is John C. Wright, owner of Wright Aircraft Sales & Service, Memphis, distributor of Aerona planes for the mid-South.

Tables Turn—All these features once lightly ignored by many fixed base operators who knew they were virtually a necessity for anyone wanting to fly in their communities, are given top listing by Wright's new enterprise — an airport for Memphis, and transient, private flyers—undertaken with a full appreciation of competition to come.

Location, a vital factor when offering a product to buyers who will want to see it without embarking upon an expedition, will be on a main highway six miles from the center of Memphis' business district.



Full Coverage: Aimed directly toward the sound business principle of satisfying the prospective customer and the past buyer, the newly conceived airport project of John C. Wright, Aerona distributor of Memphis, will provide a clean, modern showroom and administration building for those becoming interested in private flying and an interesting runway configuration that provides all-around landing strips for pilots. The pattern eliminates, almost entirely, the danger from full-circumfered landings and takeoffs jammed with turning planes.



Architecturally, the airport is being planned so that prospective buyers and users will find the "environment" of aviation as attractive as the advantages and speed of airborne travel.

A modern administration building, the clean lines of which include a demand for instantaneous maintenance, will house the show room for the Aerona to be sold there and will also provide locker room facilities and a restaurant for pilots and spectators.

Individual hangar, concrete hangars are being planned; again with an eye toward personal attention, they will provide private locker space and pilot lounge.

Work on the project is expected to start immediately. Approval has been granted by both the state air control group and the CAA. First deliveries of the Aerona are expected beginning in October. Future plans, already laid by Wright, call for cottages with adjoining hangars for rent to trans-

ient pilots and their friends while a rent-a-car service will be begun soon for visiting pilots who will desire transportation into town for business or pleasure, without the limitations of hiring a cab or taking a bus.

Air 'Campus' Expands

Facilities of the Hancock College of Aeronautics at Santa Maria, Calif., have been leased by University of Southern California (Los Angeles) for supplementary instruction in a School of Aeronautics to open November 1.

For campus ground school instruction the university has bought, under the RUC school disposal program, a B-26 bomber, a P-38, a P-47 and a P-51 as well as two Link trainers and a large quantity of accessories and instruments. The aeronautics school will offer a two-year certificate course and a four-year course in aeronautical engineering.

Warning!

With stalls listed on the stalls, aerodynamic cause of almost all the accidents listed in this issue of *Aviation News*, the Civil Aeronautics Board Safety Bureau urges consideration of the following suggestions by all private flyers.

"Airplanes do not stall of their own accord—the pilot stalls the airplane. Stalls are the result of such factors as: a) Inadequate flying speed. Induced high load factor. Overloading. Undersirable air conditions.

"Statistical records show that most airplane pilots stall the airplane as a result of:

a) Lack of knowledge of the above factors. Inability to devote their attention. Carelessness."

Careless Piloting Cited in Accidents

Poor judgment, carelessness and lack of knowledge proved the predominant causes of five lightplane accidents recently reported by the Civil Aeronautics Board Safety Bureau. Investigation of the mishaps showed poor piloting, in most cases, resulted in stalls out of turn at low altitude.

Briefs of these accidents and CAA findings follow:

PELLICANI, ILL.—Student Pilot George J. Pellin, 21, of Pellin, Ill., in light plane was killed in a fatal crash on March 14, 1945, when it stalled out of turn at low altitude. The pilot had 100 hours in this type of aircraft. He was flying at an altitude of 100 feet when the stall occurred. The wind was south through the east at the time of the crash. The aircraft was in a steep climb at the time of the stall and crashed into the ground. The aircraft fell off to the right and crashed.

CAA FINDING: Possible reason for stall was failure to maintain control of aircraft during a steep climb. The wind was strong and the stall occurred out of turn.

CONRAD, TEXAS.—Commercial Pilot B. J. Conrad, 34, of Conrad, Tex., in light plane was killed in a fatal crash on March 14, 1945, when it stalled out of turn at low altitude. The pilot had 100 hours in this type of aircraft. He was flying at an altitude of 100 feet when the stall occurred. The wind was south through the east at the time of the crash. The aircraft was in a steep climb at the time of the stall and crashed into the ground. The aircraft fell off to the right and crashed.

CAA FINDING: Possible reason for stall was failure to maintain control of aircraft during a steep climb. The wind was strong and the stall occurred out of turn.

GLENNDALE, CALIF.—Student Pilot James Albert, 21, of Glenn, Calif., in light plane was killed in a fatal crash on March 14, 1945, when it stalled out of turn at low altitude. The pilot had 100 hours in this type of aircraft. He was flying at an altitude of 100 feet when the stall occurred. The wind was south through the east at the time of the crash. The aircraft was in a steep climb at the time of the stall and crashed into the ground. The aircraft fell off to the right and crashed.

CAA FINDING: Possible reason for stall was failure to maintain control of aircraft during a steep climb. The wind was strong and the stall occurred out of turn.

Briefing

For Private Flyers and Non-Scheduled Aviation

TYPELIFT: Aviation is seeing at large-scale production of more than 10,000 planes a year, when it completes present plans for improving its assembly lines. Overhead conveyors and other equipment and procedures for speeding production are projected. In one row in the new TyeLift aircraft assembly building there is room for more than 20 planes at various stages from primary to final assembly.

BELLANCA LICENSEE:—Northwest Industries, Ltd., Edmonton, Canada, has been licensed by Bellanca Aircraft Corp., New Castle, to build Bellanca-designed planes for Canada, Alaska and for export. The Canadian company has already started to build five Bellanca "Sky-rockets," and also will build "Aircruisers," both types which have been popular single-engine cargo planes in Canada and this country. Engines will be imported or purchased in Canada, and the first plane is to be completed about Jan. 1. The Canadian company made no mention of plans to build the "Veebeetle," triple-engine, four-place Bellanca personal plane which has been subject of much favorable comment among aviators in this country, and presumably this plane is not included in Northwest's immediate production plans.

PLANE HAS UTILITY FOR EDITOR:—An article in *The American Press*, magazine for weeklies and small daily newspapers, outlines how the editor of a community newspaper would have for a personal or business plane. The article cites among possible uses: advertising and promotion of his newspaper, contacts with flight and flight instruction as prizes; quicker coverage of news stories by reporters and better photographic coverage, visits with correspondents and news agencies in the newspaper's territory; eventual dropping of bundles of newspapers to circulation centers; use of the plane for transportation emergencies connected with the newspaper, or as a community service in emergencies. The article points out availability of landing spots in rural areas, which would increase value of the plane, and urges the importance of the editor taking a vigorous stand favoring development of his own community's airport.

ONE COUNTY—20 AIRPORTS:—A master plan for developing 19 additional airports, most of them private flying fields, in San Diego County, Calif., at a total estimated cost of \$1,375,000 has been submitted to the County Aviation Advisory Committee by Gordon W. McKinstry, manager of San Diego municipal airport. The planning is being done in connection with federal airport aid bills now pending in Congress and improvement costs on the various fields suggested would vary from as little as \$11,000 each on two of the fields, to \$251,000 for a more elaborate airport.

WARNING TO STUDENTS:—CAA sounded a warning to student pilots last week in beware of the penalties attached to carrying passengers. Twenty-five student pilots who violated regulations by carrying passengers in their planes last year, had their certificates revoked in the order of the Civil Aeronautics Board. Seriousness of the violation is stressed by CAA because it indicates that the student is careless and has disregarded for the lives and safety of others.

—Alexander McEnty

CAA FINDING: Possible cause of accident was stall during a low turn in strong headwind.

YALDEN, N. C.—Student Pilot Ernest A. Yalden, 21, of Yalden, N. C., in light plane was killed in a fatal crash on March 14, 1945, when it stalled out of turn at low altitude. The pilot had 100 hours in this type of aircraft. He was flying at an altitude of 100 feet when the stall occurred. The wind was south through the east at the time of the crash. The aircraft was in a steep climb at the time of the stall and crashed into the ground. The aircraft fell off to the right and crashed.

CAA FINDING: Possible cause of accident was stall during a low turn in strong headwind.

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CAA FINDING: Possible cause of accident was stall during a low turn in strong headwind.

Continuing the peacetime tradition on which BREEZE was founded



FOUNDED IN 1924, Breeze Corporations was a vital factor in the development of clearer communications for commercial, as well as military aviation. The Breeze grew reputation as a manufacturer of such precision items as Radio Ignition Shielding, Flexible Conduit and Electrical Connectors, was further enhanced during the war years by the performance of these products and of Breeze Cartridge Engine Starters, Tab Controls, Armer Plugs and countless other Breeze specialties—all of which made notable contributions to the winning of Final Victory.

Now that the war has been won, Breeze turns once again to production for peace conditions that the products, which made the Breeze Mark the symbol of superiority the world over, will pace the progress of communications and transportation in the coming era of electronics.

BREEZE
Corporations Inc.

ROMAN 7 BUREAU NEW JERSEY



BUILT TO OUTLAST THE ENGINE!

WHEREVER men fly—from 50° below to 160° in the sun—Jack & Heintz starters have set completely new standards for sheer stamina. Running long past normal service periods under the toughest conditions imposed by war, these powerful compact lightweight units literally outlast the engine they start... and in many cases engine after engine!

Starters removed at engine change have been repeatedly reinstalled with only a change of brushes. Usually even this may be unnecessary for since the beginning of the war, Jack & Heintz research has increased starter brush life from 500 to 17,000 cycles of operation.

Such performance—all a matter of record—has helped keep more planes on the skyroad to the victory that is now ours. In peace, it means greater safety, longer service life, lower costs.

The great new starters that have set such service records are now available for use in civilian aircraft. If you're interested in cutting maintenance costs in your business, write us for complete performance data today!



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Jack & Heintz Inc., Cleveland, Ohio, Manufacturers of Aircraft Engine Starters, Generators, Magneto's, Motors.



STARTERS



TRACTION MOTORS



GENERATORS



SEARINGS

PERSONNEL

Corwin Replaces Nesbitt On ADMA Directorate

C. L. Corwin, area manager of the Champion Spark Plug Co., Toledo, has been elected to the board of directors for the Aviation Distributors and Manufacturers Association, to replace Sidney Nesbitt who resigned upon appointment as president and general manager of Athletic Aviation Corp. of New York. The new director has served previously with the group's merchandising committee.

Fred H. Grieme Named European Air Advisor

Fred H. Grieme, former chief of CAA's airport technical development section, has been named as aviation adviser to the European aircraft industry. Main objective of the assignment is to produce a standardization of European post-war aviation industry with U.S. criteria. Grieme will probably leave for his new post this week and as a consultant will be named to aid him later.

Mid-Continent Elects W. L. Walker Treasurer

W. L. Walker, former assistant comptroller of Mid-Continental and Western Air, Inc., has been elected to the position of treasurer of Mid-Continent Airlines. At the same time, the late endorsement of Ted Gilmore as superintendent of terminal and express to head all development and promotion of the carrier's program in these departments.

James J. Fausch, Gebel, western transportation official, has been named regional traffic manager for Northwest Airlines at New York. A member of the Northwest traffic organization for six years, he was made traffic passenger manager for the airline last year to assist H. O. Bulthuis, vice-president, in preparing the way for the start of the company's transcontinental route between New York-Detroit and the Pacific Northwest. Fausch was associated with Thomas Cook and Son, world travel agents, for six years before joining Northwest.

Nesbitt I. Paine, formerly vice-president and divisional manager of the public Aviation Corp.'s Indiana Division plant, has become Vice-president in charge of all sales at the company's home office in Farmington. He will be in charge of transport, a and personal plane sales, military contracts, exports, service, public relations, publicity, advertising, and plant and employee publications.



Paine joined Republic in 1939 as assistant director of exports, and became a director of the corporation in 1941.

R. A. Howe, Jr., has resigned his position as public relations director of Consolidated Vultee Aircraft Corp. and will head a public relations firm in Los Angeles. His successor post has been assigned to John Avery.

J. C. Brouwer, selected to the president of National Airlines, has been elected treasurer of the company and also a director. J. D. Crane, vice-president in charge of maintenance and engineering, was elected a director at the same meeting.

Lesley D. Kiley has been appointed general manager of the First Instrument Division of Reuben Aviation Corp.

Karl F. Loeder, until recently a Commander in the Naval Air Transport Service, has resigned Pan American Airways as control operations manager, Pacific-Alaska Division. Loeder joined Pan American originally in 1933, and was among those who helped master the trans-Pacific air routes to Manila in 1935 and the South Pacific in 1938.

Bernard Kretzel has been named director of dispatch for United Air Lines, with headquarters at Chicago.

Thomas Miller, formerly staff statistician for Chicago and Southern Air Lines, has been appointed to the position of director of economic research, directly attached to the Legal Department.

Leah K. Kelly has been named assistant vice-president of the Air Transport Division, travel department, of American Express Co. Kelly served until recently, with the rank

of Lieutenant Colonel, as Deputy Assistant Chief of Staff, Personnel and Traffic, European and Mediterranean Theater of Operations, Air Transport Command.

Ken Wales has left Fairchild Aircraft Division of Fairchild Engine & Airplane Corp. and is now engaged in private business in New Hampshire.

Howard Whitford, for 22 years aviation editor of the Oakland Post-Tribune, has resigned to become manager of the aviation division at the Oakland (Calif.) Chamber of Commerce.

Charles H. Bush, head of the international aircraft sales and service organization bearing his name, and one of the world's leading dealers in used aircraft and parts, was married, Sept. 21, to Elizabeth Bergen, senior stewardess on Pan American Airways' Alaska service.

Ernest M. Potts, former St. Louis Globe-Democrat editorial staff member, has been appointed director of public relations for Pan Air College, Inc., Perth Amboy, N.J., and Service, Inc., and Pan Air Transport, Inc. He replaces Frank Meyer who becomes field editor of Airports magazine.

James W. Adams (photo) has been appointed chief engineer in charge of airport development work for McCaughey-Cary Associates, New York City. Adams was formerly engaged in architectural, industrial and engineering design and research prior to joining McCaughey-Cary.



McLaughlin-Cary, Adams was engineer in charge of airport engineering, design, construction and maintenance for Curtiss-Wright Corp. Considered one of the nation's airport development work, he designed and supervised the old North Beach airport, predecessor to La Guardia Field in New York's municipal airport.

Charles W. Folker succeeds W. E. Magnusson as factory superintendent of the Vultee Field plant of Consolidated Vultee Aircraft Corp. Magnusson was transferred to Cessna's Port Worth division. Prior to joining Cessna, Folker was widely known as a designer of racing cars.

Robert Wilson has been appointed aviation communications supervisor over a number of stations in the Caribbean area for Pan American Airways.

Stars in the sky.... the Lockheed PV



a great airplane that flies first on Chevron Aviation Gasoline

This Hit-and-Run Attack Bomber was designed to be a sub-bomber specialist. But its speed, stamina and maneuverability made it too good to be tied down to patrol work exclusively. Now rated high among the most versatile weapons in the U. S. Navy arsenal, many fleet PV's try their wings on Chevron Aviation Gasoline.



ON LONG SEA SEARCHES pilots of PV's locate their low on south-eastern Chevrolets engines. Designed for combat, this great flying fuel burner water performance, rate detection danger in civilian aircraft, too.

FROM PARASHUTED in the South Seas, PV's have beaten Japs to high clouds and attack bombers, fighters, sub-bombers, reconnaissance ships. They run up better than 1000 miles more than 1000 miles. For trained and fighter of many of these hard-fighting PV's, Lockheed selects Chevron Aviation Gasoline.

TNT TORRENT deluged to Japs by the PV, "the South Pacific Search Plane," may be 2000 lb. torpedoes, six depth charges or an 800 lb. bomb. Additional bombs or depth charges may be substituted for dropable fuel tanks.

TAKE IT FROM TEST PILOTS—the best Chevron Aviation Gasoline comes consistent top performance from aircraft engines. And take it from us—Chevron Aviation Gasoline will do the same for your personal plane... and make it, too, a star in the sky.

CHEVRON AVIATION GASOLINE

STANDARD OF CALIFORNIA
See Standard, 100°

COMMENTARY

Longer-Range Bombers, Airbases Believed Key To U. S. Protection

Maintenance of AAP installations here and abroad seen as vital adjunct to Navy plan for retention of major bases in Atlantic, Pacific; new ships expected aloft within year.

The recent non-stop flight of three B-59's from the Mustang airfield, Hokkaido, to Chicago (even though headwinds over Canada prevented completion of the 8,854-mile trip to Washington without refueling), emphasizes once again that we are living in "one world."

It is true that these Superforts were as heavily loaded with fuel that Generals Giles, LeMay and McConnell and their veteran crews of the XX Air Force traveled with practically no baggage, and the big bombers carried not even a 56-caliber shell. Besides that, it was a one-way trip.

Present Range—The effective radius of action of presently available equipment such as the B-39 and B-52 with maximum bombload is hardly more than 2,400 miles. However, present long-range bombers, properly so classified,

such as the large XB-35 Northrop Flying Wing and the still larger Consolidated Vulture XB-36, should be flying within six months to a year, and these will have a radius of action in the 4,000-5,000 mile bracket, with substantial bombloads.

With atomic bombs aboard, the amount of destruction carried by these and other super-bombers now under development staggers the imagination. Some of the new prospects may be powered by gas turbines for propeller drive.

Perimeter Defense—Basic United States strategy has been to keep any fighting away from home soil. This means long-range striking power and avoidance of purely defensive warfare.

This is the philosophy behind the Navy's recent announcement of its desire to retain 2 major bases in the Pacific (Okinawa, Manila,

Iwo, Guam, Manila in the western Pacific; Adak & Kodiak in Alaska, and Pearl Harbor) and 7 similar installations in the Atlantic (Hilton & Consuelo in the Canal Zone, Roosevelt Road, San Juan and Guantanamo in the Caribbean, Bermuda, and Argentina, New-Blandford). The last two are U. S. bases held under 99-year leases from Britain, Argentina Bay is on Cuban soil, and Manila is located in the Australian-mandated Admiralty Islands. It is quite probable that these bases outside U. S. territory will be under United Nations Security Council trusteeship.

It is just as important to have far-flung air bases so that the first steps of an aggressor may be stopped in the bud, regardless of whether the aerial armament to be launched against us be fast, long-range bombers, or rocket or jet-propelled guided missiles.

Industry Shield—The further away they can be interested the less likelihood is there that American industrial centers will be destroyed.

The Navy is going ahead with its program of fast carrier task forces, including the big 45,000-ton battle carriers.

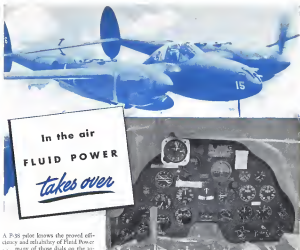
Some of the huge Army Air Force bases in the Pacific will also be retained.

Airport Shields—AAF Headquarters is considering a list of airports both within and outside the United States to be retained as military bases during peacetime, and it is expected that many military airports will be retained to civil control. Balance of the bases depends on the developing international situation, extent of this country's participation in the proposed international organization, size and deployment of the armed forces as decided by Congress, and the status of aeronautical development when bases are selected.

There is a very definite feeling in the Army that for both military and commercial reasons the United States should have permanent operational rights to American-built military air bases in the Caribbean, the Guianas and in Brazil.

Similar considerations might also apply to the fantastically huge Air Transport Command base at Goose, Labrador, the Azores, and Inkjar, West Africa. Many of these will, of course, be subject to State Department negotiations, and will be affected by United Nations Security Council policies.

NAVY/AF



A P-38 pilot knows the proved efficiency and reliability of Fluid Power . . . more of those duals on the assurance pad as front of him are selling a constant story of Fluid Power at work.

Wing flaps, ailerons, radiator flaps, landing gear, brakes—all are Fluid Power operated and controlled in the P-38. In addition, engine primers, fuel tank sensors, together with fuel, oil, vacuum and oxygen systems, are fascinating components of the plane as a result of Fluid Power Engineering.

For more than twenty years . . . from the peace years of aviation pioneering through the

war years of mass airplane production . . . Parker tube fittings, valves and related products have won the unequalled endorsement of aircraft builders everywhere.

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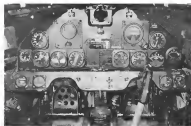
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New PCA Debenture Offering Highlights Proven Finance Plan

Proposed \$10,000,000 convertible income issue based on practice of "liquidation" through conversion into common stock rather than by retirement; to finance retirement purchases.

The proposed offering of \$12,500,000 in convertible income debentures by Pennsylvania-Central Airlines, highlights a successful form of financing used by the airlines in the past. PCA plans to issue these \$500,000 4½ percent sinking fund debentures to finance its retirement purchases.

In effect, while a senior issue is sold to the public (thus making it more palatable), it is usually "liquidated" not by retirement but by conversion into common stock. This has been the experience of previous convertible debenture and preferred stock financings in the oil and gas industry.

Post Procedure—For example, on November 15, 1961, FCA marketed 75,000 shares of \$1.25 convertible preferred at \$25 per share. While this issue was officially called for retirement at \$27 per share on May 15, 1964, actually very few shares were liquidated in this manner. Virtually the entire issue was converted into common stock at the rate of two shares of common for each share of preferred held. At least it proved profitable to do so as those two shares of common are now worth around \$62 as contrasted to the \$27 for the one share of preferred. The holder would have received on the call date.

Similarly, American Airlines issued 50,000 shares of \$4.25 convertible preferred at \$102 a share on October 30, 1940. This stock was convertible into the old common stock at \$70 per share or 1 3/4 common shares for each share of preferred held. At that time, the price of the common stock was so low as to make the conversion value meaningless.

However, the boom in airline equities reached such proportions that at the 1944 year-end, it was found that 44,613 shares of preferred had been converted into

127,466 shares of common. Very few preferred shares remained to be redeemed at the official call of \$388 per share on January 15, 1945. It certainly would have been detrimental to a preferred shareholder not to have followed the conversion route and to have accepted the call price.

Aesthetic Case—United Air Lines, at the end of 1983, issued 395,832 shares of 4½ percent convertible preferred stock around par, \$10 per share. Each \$30 of par value of preferred stock is convertible into one share of common stock at the rate of 3 1/3 shares of common for each share of preferred. Present market prices indicate that this stock will also, in due time, most likely be converted into common rather than be retired at the callable price of \$107 1/8 per share.

The only case where convertible debentures were previously used among the air carriers was in 1932 when American Airlines adjusted its capital structure.

Consolidating the indebtedness American issued, in part, \$2,771-\$113 in five year 4% convertible debentures to Aviation Corp. The latter, in turn, immediately sold this issue to the public.

Price Rise—Each \$1,000 debenture was convertible into 80 shares of common stock or at the rate of \$12.50 per share. With the phenomenal rise in the price of the stock, it obviously became more profitable to convert the debentures rather than await their redemption at par. Today, the original holder of a \$1,000 debenture who elected to take stock, adding for the two-1/2-cts split of December, 1944, would own 160 shares of American Airlines com-

This is not to suggest that the same pattern will follow the present PCA financing. The very fact that the issue is a convertible debenture calls attention to its speculative attributes and the risks it entails.

Financing of this type is resorted to as an "sweetener" the same to a prospective investor. A senior security, while having no mortgage on assets, is issued. Yet, should the enterprise prove successful, an avenue of participation to the profits is provided by the conversion privilege. It must be recognized that a senior issue despite its conversion right, is of little value if the company is unsuccessful and fails.

► In the final analysis it must be further recognized, that all of these convertible debentures and preferred stocks simply serve to dilute the existing common stock equity and ultimately broadens the base over which profits—and losses, too—must be distributed.

Irving Air Chute Files SEC Report

George Wain, president of Irving Air Chute Co., Inc., was paid the sum of \$40,000 for his services as president, general manager, and director of the company for the fiscal year ended Dec. 31, 1964, according to the company's annual report to the Securities and Exchange Commission.

Other salaries included \$42,000 to Leslie L. Irym, vice-president and director, and manager of the company's subsidiary, Irving Air Chute of Great Britain, Ltd., of which \$25,000 was paid by the latter, and \$93,000 to Harold G. Rogers, assistant treasurer and manager of the company's Lexington, Ky., branch.

• Sales—The company's statement of profit and loss showed net sales of \$4,456,176 in 1996. Cost of sales amounted to \$3,700,185. Net income before provision for taxes based on the current year's income amounted to \$528,614, and to \$298,614 after these obligations were satisfied. Net income transferred to surplus was \$32,974.

Lockheed War Dividend

Lockheed Aircraft, which has figured strongly in the news lately, has further eased peace warriors of stockholders by a first "war dividend" of 36 cents per share of capital stock as of record Sept. 25.

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PRODUCTION

Surplus Air Plants Report Indicates Commercial Usage

Extent to which warbuilt aircraft facilities will continue exclusively aviation production left speculative, however, by analysis of five RFC disposal disclosures; many sought by other than wartime operators.

Prospects that the great wartime aeronautical facilities will be used for peacetime commercial production appear bright on the basis of an analysis of the first report on surplus plant disposal by the Reconstruction Finance Corp.

However, the report still leaves room for speculation on the extent to which they will continue in purely aeronautical production. Of the more than 100 aircraft plants covered in the survey, only a handful have been sold or leased to the wartime operators, with the vast majority being requisitioned for use by more than one firm.

Total Cost.—The aviation facilities included in the RFC report were built at a total cost of \$1,106,237,808. Total investment in aircraft facilities during the war has been estimated at \$3,443,560,000, with the government putting up about 91 percent.

Of the six plants which have been sold, only one is an airplane producer. That is the Riverside,

Mo., plant of Engineering & Research Corp., maker of the Republic. This was purchased by its wartime operator at the original construction cost, \$116,579.

Other than that, the sales prices have been below cost, with the total for the six plants being 19 percent of the amount originally invested.

Aircraft Plants.—Three other plants have been acquired by their operators: Aero Supply Manufacturing Co., Corry, Pa., cost, \$661,275; price, \$327,218; General Motors Corp., at Buffalo, cost, \$3,070,392; price, \$5,550,593; and Briggs Manufacturing Co., Detroit, cost \$3,278,982; price, \$2,315,458.

Two of the six plants have been purchased by firms other than the wartime operators. These are the Kellerman facility at Banghampton, N. Y., which cost \$239,456, and has been bought by General Airline & Film Corp. for \$173,000; and the Condon Drop Forge Co.'s aircraft cylinder head plant at Massillon,

Ohio, which cost \$782,797, and has been sold to the Massillon Aluminum Co. for \$215,000.

RFC has entered into leases on six aeronautical factories which cost \$42,079,847 to build. Largest of these is the engine plant at Chicago that was operated by the Studebaker Corp., and which cost \$25,315,000. This has been leased to the Western Electric Co. The plant used by Howard Aircraft Co., at St. Charles, Ill., has been leased by Mooney Radio and Television Corp. It cost \$125,200.

Leased Back.—Four other firms have leased a wartime facility they operated. They are Bell Aircraft Co., Burlington, Vt., which cost \$1,645,415; Fairchild Engine & Airplane Corp., Jamaica, N. Y., which cost \$3,582,360; Aeronautical Products, Inc., two plants at Detroit and Washington Court House, Ohio, which cost \$3,754,618; and Ford at Janesville, N. Y., which cost \$2,531,456.

Two other companies have signified their intentions to exercise the option in the wartime contract to acquire the plants they operated. These are Liberty Aircraft Products Corp., Farmingdale, N. Y., the plant of which cost \$2,162,118; and Schweizer Aircraft Corp., Kansas, N. Y. This plant cost \$846,608.

The RFC report, which covers transactions through September 1, indicates encouraging interest in aircraft plants. There are 21 for which negotiations are under way in the "advanced stage." These cost \$324,712,300. There are more than 50 others in which more than one firm has expressed an interest. Total construction cost of these facilities amounted to \$357,164,917.

Aircraft Related.—On the other hand, the survey embraced 24 government-owned industrial plants of various categories that have been sold, and 48 that have been leased. Perhaps significantly, of these 46 plants only eight aircraft plants are to be continued in aeronautical production by their wartime operators.

Although no further information was given, negotiations were reported to be in an advanced stage for the two Consolidated Vultee plants at San Diego, and others at Alhambra, Pa. and Miami Springs, Fla. Total cost of these facilities was \$33,821,000.

Like status was given for the \$45,252,593 Wright plant at Paterson, N. J., the Republic facility at Farmingdale, N. Y., which cost

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NOORDUYN NORSEMAN P.

The Canadians designed and built plane is sold in production at Noorduyn's Montreal plant. Photo shows one of the new models in use by the Ontario government's Ontario Provincial Air Service, main improvement over pre-war version is an increased payload.

Chandler-Evans Vacates Three War-Used Plants

Drawing back of the Chandler-Evans Corp.'s manufacturing activities into the parent plant of the Niles-Bentzen-Pond Co., at West Hartford, Conn., makes available for sale the war-used facility at Meriden, Conn.

Other plants being vacated by the reorganizing activities of Chandler-Evans' wartime production of carburetors, fuel pumps, and other accessories, are a government-owned facility at Dayton and a rented unit at Wallingford, Conn., with Provit & Whitney, Chandler-Evans is a subsidiary of Niles-Bentzen-Pond.

Planned Move — According to company spokesmen, the withdrawal move has been planned ever since the company began its wartime program and is now being brought into action because of cancellations and a surplus of factory space. It is also considered desirable to concentrate activities of the company. There will be no change in the separate identity of the company or of its products, it is asserted.

Schweizer Aircraft Plants

Schweizer Aircraft Corp., Elmhurst, N. Y., has resumed the manufacture of gliders and sailplanes after two years of subcontract production of parts and assemblies for Republic Aviation

Curtis-Wright, Fairchild and other major aircraft companies. Schweizer plans a complete line, the first model of which will be a utility glider which is expected to be all the line by the end of October. Others will be a utility sailplane, a high-performance two-place sailplane and a single place sailplane.

Reconversion Gap

Fairchild light has been slow to reconvert manufacturers' plans to bridge the reconversion production gap, with the disclosure that both Republic Aircraft Corp. and the Glenn L. Martin Co. have contracts with airlines for outfitting C-54s as commercial transports.

While Douglas Aircraft Co., maker of the C-54, has stated it expects that some of the aircraft being released to airlines will go back to the home plant for reconversion, Republic has a definite order from American Airlines for the modification of 50 of the big ships.

Deadline — Republic's deliveries will begin in December and must be completed in May. The company will have to add 1,800 employees to fulfill the contract.

Number of aircraft involved in the Martin work has not been disclosed, the company merely stated it has firm orders with two airlines for conversion of C-54s.

'Coast' Air Jobs Set At 40,000

Forty thousand workers in the maximum stabilized total of workers which Douglas, North American, Northrop, Lockheed, Consolidated Vultee and Ryan may be expected to employ in the near future according to the estimate of John Lee, chairman of the aviation committee of the Los Angeles Chamber of Commerce.

William Peters, associate of Lee, delivered the estimate recently to the Los Angeles Citizens Reconversion Council. He said that except for a few high skill positions and engineering posts there are no jobs today in the western aircraft industry plants.

Employment Chart — At its peak, the Southern California aerospace industry employed 275,548 workers. Christmas had cut the total to 131,393 on August 1, and today the employment total stands at 84,354. It is due to drop toward the "stabilization" level forecast by Lee as plants wind up their terminated contracts.

Lee, head of Menasco and formerly with the Aircraft War Production Council, said his estimate of 40,000 was based upon the promise that the Southern California companies capture 60 percent of the aircraft industry's national post-war business. He conceded the figure he gave was rock bottom and should rise at a later date when new business develops. He made no guess as to when the rise might begin.

Packard Reconverts After Air Engine Task

Nearly 35,000 Rolls-Royce warcraft engines were produced by Packard Motor Car Co. on their wartime contracts, a job which required the transition of some 2,000 "left-handed" British blue-prints which had to be redrawn.

During the war, employment climbed until 15,000 persons were turning out Rolls-Royce engines, used in five types of aircraft, and 13,000 marine engines, used in PT boats.

Peace Growth — George E. Christy, president and general manager, said that while the company can not hire that many now "we hope to build up gradually to employment double our peacetime peak for the production of 200,000 cars and other Packard products."



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TRANSPORT

Air Role For Shipping Firms Becomes Hawaiian Case Issue

Matson leads new argument against denial of steamship firm aviation operations; hearing also marked by pleas for added service to islands; area formula, certificate increases considered.

Appeals for plan statements of Civil Aeronautics Board policy mingled with pleas in behalf of specific proposals for additional West Coast-Hawaii air service on the board heard last week in the Hawaiian case last week.

Principal issues:
 ▶ Participation in air transportation by shipping companies.
 ▶ Maintenance of balance between large and small carriers.
 ▶ Application of the area formula.
 ▶ Increase in number of certificates.
 ▶ Provision of competitive service.

Examiners had selected United Air Lines to compete with Pan American Airways between the West Coast and Hawaii over an air route between Honolulu and the so-called San Francisco and Los Angeles (ATTN: NWA, July 23). They recommended denial of applications by Northwest Airlines, Western Air Lines, Hawaiian Airlines, Matson Navigation Co., and the Ryan School of Aeronautics.

Matson Navigation Co., stressing a "new and improved" type of transportation service combining one way by ship with one way by air, contended that denial of its application in this case, on the ground that it would favor its steamship traffic over its operations, would require CAB to deny all future applications by shipping companies.

Business Arguments—M. E. Harrison, attorney for Matson, asserted it would not even logical to believe that the company would wreck its proposed non-subsidized \$1,000,000 air operation by more favorable promotion of its ship service.

Dreading his argument to the legal implications of the issue, Harrison said that the board can properly consider objectives stated in other acts of Congress in fulfilling its purpose to promote air transportation. The CAB has "a

duty to consider correlation of air service with other transportation service which is equally or more essential to those interests of isolated islands and of commerce," he declared.

Lending weight to Matson's proposal in this instance and, at the same time, to the position of steamship applicants in other proceedings, were similar arguments by the interveners, National Federation of American Shipping and U. S. Maritime Commission. San G. Baggett, representing NFAS, contended it considerable delay the legal questions involved, while Allen Briggs, for the Maritime Commission, argued for retention of the shipping industry by affording an opportunity to exploit both sea and air service.

Balance—The question of maintaining balance between large and small carriers was promoted by Hawaiian Airlines and Western Air Lines. Leslie Crover, for

Hawaiian, operator of an inter-island route of 393 miles, stated that selection of a carrier should be between his company and United. On that basis he asked the board, "Are you now going to depart from your established policy of building up small lines?" If so, he maintained Hawaiian's only cause was to become absorbed by United.

Western Air Lines, through Hugh W. Durbin, argued that if CAB intended to maintain the proper balance, routes across continental borders must go to smaller carriers.

Application of the area formula was sought by Northwest Airlines, backed by the Ports of Seattle and Tacoma. Seth W. Richardson, on behalf of NWA, told the board it should "put first things first" by determining at the outset whether the Puget Sound area should be linked with Hawaii through a gateway in the Pacific Northwest.

Policy Plea—Arguing for certification of the Ryan School of Aeronautics, John S. Wynne pointed out that the examiners had found Ryan fit, willing and able, although they recommended against its certification on the grounds it might not be able to offer the competition required or find the service profitable enough to develop and maintain a sound operation. Wynne contended that an observation by the board, in a previous case, that the number of air carriers should not be increased "merely for the purpose of mechanically enlarging the industry" presented a policy problem that should be decided, in the instant case, in Ryan's favor, lest future prospective new airlines also be precluded.

United's counsel, Paul M. Godel, and there was need for an additional carrier over the route between Hawaii and the Mainland. The company promised that nationwide expansion would be in creating new businesses and offered "better service for more travelers at lower cost."

Pan American, an intervenor, argued on the other hand that parallel competition would be uneconomical and inefficient and that the best traffic estimates and suggestions that the board decide the Hawaiian case later, with the pending Pacific case, meanwhile giving PAA a chance to operate the route on its own under a competition, to prove its point on the economics of the matter.

Dozen Airlines Boost Schedules In Preview Of Peace Planning

Service resumed at some points skipped during war; unfilled route authorizations get promise of early activation; trip additions pour in on nationwide basis; aircraft curtailments are few; international operations also increased.

A dozen domestic airlines stepped up their services last month in a preview of continued increases expected as additional equipment becomes available.

All over the nation trips were added and service was resumed at some points that have been without it. There were, however, a few curtailments. Internationally, Pan American Airways increased its service, principally in Latin America.

Service List—Among the changes reported to the Civil Aeronautics Board during September were the following:

All American Airlines added one round trip daily except Sunday on its air pickup service between Pittsburgh and Philadelphia.

American Airlines added one round trip daily between New York and Los Angeles, resumed

service at Baltimore, and inaugurated nonstop service between Oklahoma City and El Paso. It also eliminated two flights into Windsor, Canada, and one cargo flight between Los Angeles and New York.

Bozell Airways inaugurated service on an extension from Oklahoma City to Memphis via Tulsa, Fort Smith and Little Rock on AM 15.

Delta Air Lines added a round trip from Atlanta to Fort Worth and Fort Worth to New Orleans, and inaugurated nonstop service between Monroe, La., and Dallas and Dallas and New Orleans.

Eastern Air Lines added four round trips daily between New York and Washington.

Inland Air Lines, subsidiary of Western Air Lines, resumed service at Sheridan, Wyo.

Mid-Continent Airlines inau-

garated one round trip daily to Fort Smith, Ark., on AM 25.

National Airlines added one round trip daily between New York and Miami, and inaugurated nonstop service between Jacksonville and Miami.

Northwest Airlines added one round trip daily between Spokane and Seattle, resumed service at Wenatchee, Wash., and inaugurated nonstop service between Seattle and Wenatchee. Northwest, as the first step in a program to provide direct flights between New York and Detroit and New York and Milwaukee, has asked CAB to remove restrictions under which its eastbound flights into New York must originate at, or west of, Minneapolis-St. Paul, and flights westbound from New York must terminate in, or west of, the Twin Cities.

Pennsylvania Central increased service to Baltimore. Arrangements are being made to resume service under PCA's St. Louis-Knoxville route, suspended shortly after Pearl Harbor.

TWA added round trip daily cargo flights between Chicago and Kansas City, Kansas City and Los Angeles, and Los Angeles and San Francisco.

United Air Lines added a round trip daily passenger and cargo flight between Chicago and San Francisco, inaugurated nonstop service between Chicago and San Francisco and between Denver and Sacramento.

Western Air Lines added a round trip daily between Los Angeles and San Francisco, and inaugurated service between Los Angeles and Salt Lake City. Service was suspended at Idaho Falls. Western has announced that service it has been authorized to provide San Bernardino, Palm Springs and El Centro, Calif., will be started on a two-flight-daily basis sometime in November.

Pan American added a round trip on Sunday, Tuesday, Wednesday and Saturday between Balboa and Lima; added three round trips daily between Miami and Havana; added two flights weekly, cargo and mail only, between Miami and La Guasca and Miami and Baranquilla; and added a daily round trip flight between Seattle and Juneau, Alaska. The company also announced an extra flight section on its New York to Bermuda schedule, and an increase in flights to Venezuela from 16 to 26 each week, the additions include eight new passenger and two

cargo flights, and to Colombia from 16 to 24 each week, including six new passenger flights and two new cargo flights weekly.

TACA de Colombia has announced the opening of a new route between Colombia and Cuba, Rosa, on which survey flights have been made and schedules will be started when recently acquired equipment is ready.

C-69 Deliveries Start This Week

Lockheed discloses firm commitments for 163 Constellation; first units go to TWA; French orders received.

Deliveries of the first new Lockheed Constellation were slated to start Oct. 1, with the first units going to Transcontinental & Western Air, first company to order the plane and the carrier for which it originally was conceived.

Announced by Lockheed Aircraft Corp. last week, also discloses that the company now has firm commitments for 163 of these four-engine planes, which will carry 48 to 64 passengers at a top speed of more than 340 mph.

New Buyer—One name has been added to the list of seven airlines reported last week to have 94 Constellations on order (Aviation News, Sept. 24). French Government Airlines is said to have ordered nine or ten though the number is not disclosed by Lockheed. The manufacturer says the total commercial backlog for the 163 ships is \$73,280,000. The company contemplates production for immediate delivery of about 60 military type Constellations, modified for airline service.

Grounded—Air Transport Command C-69 Constellations have been operated across the country by both TWA and Pan American Airways, but the operation was temporarily discontinued last week when all Army Constellations were grounded pending Army investigation of an engine fire that occurred on one of the ships. The plane landed safely at Taseke, Kans., airport but further flights were held up until cause of the fire could be determined.

Lockheed also disclosed that "a number of times" have ordered, conditionally, its projected Constellation and Saturn twin-engine liner, to the amount of about \$95,200,000.

Contract—Despite military con-

Western-AA Joins In Freight Venture

Four inter-line air cargo agreements expected to begin early in November.

Western Air Lines and American Air Lines have entered into what is believed to be the first inter-line air freight agreement.

It is expected to begin functioning soon after Nov. 1.

Freight Opportunity—For WAL to share in increases of an ambitious air freight program, to be started by feeding freight from the San Francisco Bay area into AA at Los Angeles for shipment east.

American area in the agreement, a foot-in-the-door opportunity to begin tapping the San Francisco freight market, heretofore closed to the company because it has no Los Angeles-San Francisco route certification.

It may be assumed that the WAL-AA deal will be the forerunner of a succession of similar interline air freight pacts, made possible by ease of air-plane shortages and availability of ground handling equipment.

Rate Range—Western's freight rates from San Francisco to the East Coast, via American, will range from a top of 45 cents per ton mile to a minimum of 32 cents per ton mile.

Western eventually will extend



Ready: Five new Constellations, as seen at the Lockheed Aircraft Co. plant at Burbank, Calif., are shown in this just released photo.

tract terminations. Lockheed's president, Robert Gross, reported that Lockheed has a moderate production contract for the P-30 Shooting Star and is developing for plant-line production the P-30 Navy patrol plane.

Military contracts after termination of orders for P-30 Lightnings, P-32 Harpoon patrol bombers, C-69 Constellation and the famous B-17 Flying Fortress left a Lockheed backlog of military work of \$137,846,372. The company's firm military and commercial backlog total \$212,106,372.



TWA Signs for "Constellations": Largest single contract awarded thus far for Lockheed Constellation has been signed by Transcontinental & Western Air for 96, cost, \$26,000,000. Picture shows TWA President Jack Frye (right) signing at TWA's executive offices in Washington, with Carl Squier, vice-president of Lockheed.



STRATOCRUISER GALLEY:

Passengers on the 116-foot Boeing Stratocruiser would be served from a galley like that shown in this picture from Boeing's workshop of the ship, a commercial version of the C-97. Work tables, cupboard space, vacuum containers and other equipment for complete food service are featured.

freight operations to take in all cities within its own system. Ray Gifford, cargo manager, says his company will spend approximately \$15,000 for tractors, loading trucks, cargo hoists and other ground devices at each airport designated for air freight handling.

The line has been studying cargo possibilities for more than one year and has gained extensive experience in the flying of 25,000-400 pounds of cargo for the Army as well as in the flying of experimental shipments of perishables.

► **Size Limit**—At the outset Western may be expected to limit unit size of air freight shipments out of San Francisco to some extent, as in cargo sections of its San Francisco-Los Angeles DC-3 fleet.

Virginia Air Service Applications Postponed

The Virginia State Corporation Commission last week continued until April 1, 1946, applications by five companies for air certificates of convenience and necessity under the Virginia Aeronautic Carriers Act. The decision was made by agreement with counsel who expressed the feeling that equipment for satisfactory service might not be available for several months, but agreed that consideration of route requests might be accelerated at any time on 30-day notice to other applicants.

Companies requesting postplane were Blue Ridge Lines, Inc.; Greyhound Skyways of Virginia, Inc.; and Consolidated Bus Lines, Inc. Major opposition to most of the proposed lines came from the Chesapeake and Ohio Railway Co., which serves a number of points covered by the applications.

Airline Service Threats

Airline ability to offer the public lower prices, better equipment and greater regularity of service are threatened by two major difficulties, according to Stuart G. Tipton, acting president of the Air Transport Association.

These threats are: The possibility of over-regulation through the "expressed intention" of many states to pile state restrictions on the federal Civil Aeronautics Board's proposals of integration of surface and air transport. Tipton addressed Indianapolis industrial and business leaders and airline representatives at the close of a five-day meeting of the Air Traffic Conference at Indianapolis.

U. S. Gains Airline Advantages; Netherlands Signs Full Air Pact

Dutch action seen placing American air transport in better European position than Britain; new adherence to "five freedoms" ideal believed possible lever for liberalization of European aviation policies.

The Netherlands government, in an action destined to favor American and to have the reverse effect on British aviation, has agreed without qualification the International Air Transport Agreement produced last year by the International Civil Aviation Conference at Chicago.

Previously, the Dutch had criticized the so-called "Five Freedoms" agreement but with the important reservation that they did not subscribe to the fifth freedom, the one under which airlines may pick up and discharge traffic at intermediate points.

► **New Ally**—In renouncing this reservation, the Netherlands allied itself squarely with the freedom-of-the-air policy proposed at Chicago by the American delegation after failure to reach an acceptable compromise with Britain on the question of economic regulation of air transport.

State Department officials re-



GREAT LAKES CASE

Complexity of so-called "area proceedings" before the Civil Aeronautics Board is well illustrated by this picture of Executive William F. Connelley with the greater portion of exhibits submitted in the Great Lakes Area case. Hearing, involving about 70 applicants, opened today in Indianapolis, but, with approximately 40 persons in testify.

vealed the Netherlands decision sharply after the American Export Airlines C-54K aircraft took off in a survey flight over portions of the route awarded that line by the Civil Aeronautics Board in the North Atlantic case.

The flight was scheduled to cover Newfoundland, Ireland, Scotland and England. Export officials said they doubted the aircraft would be routed via Amsterdam because of insufficient facilities there at the moment.

► **Service Issue**—But they added that commercial services probably can be expected between the United States and the Netherlands by the end of this year.

An earlier move toward the American government has converted a leading civil air power to its aviation philosophy and has won important commercial rights in a nation strategically placed as far as this country's air ties with Europe are concerned.

Government officials are hopeful that the significance of this move will not be lost on countries adjacent to the Netherlands and that they likewise will accept freedom-of-the-air as the surest means for peacefully advancing international aviation.

► **Bargaining Power**—Not only is the Dutch move one which gives America an advantage in Europe over Britain, whose refusal to sign the five freedoms prevents her from exercising similar rights, but it also is one which Americans believe will give the government more bargaining power when finally a bilateral agreement is negotiated with Britain.

The British government much to the dismay of some British aviation interests, appears rapidly to be joining the United States in the attitude toward the Netherlands, but not touched by American air routes. Opponents of this development seem to feel that Britain has gone too far, essentially, thus she has to give.

► **End of Isolation**—In fact, is the emergence of the Netherlands

as a freedom-of-the-air advocate. The Netherlands has long exercised one of the most efficient and extensive air businesses in the world. The Dutch, with a large colonial empire, now fit to adhere to the open vision philosophy, any-where, were present among the British, with a large colonial empire, will begin to liberalize their aviation policies.

► **Philosophy**—Behind the American and Dutch view on aviation is the philosophy that long air routes cannot be operated if there are such restrictive regulations that enough traffic cannot be obtained to support the routes. Britain, with ambitions to link the Commonwealth with British airlines, sooner or later must accept this view, Americans contend.

The Netherlands' action is endorsing the five freedoms means that the obvious commercial privileges at specified American airports, as do all signers of the agreement.

A fair portion of Export Airline's routes now appears to be

operable, from a political standpoint. This line may fly to Ireland, land commercially, proceed to Britain and land for noncommercial purposes, then go on through the Netherlands to Sweden doing business along the way. It also may fly to Sweden via Iceland. In the foregoing pattern all that remains is to complete certain arrangements with Norway and Denmark, which, it is understood, is being done now.

Plan To Trade Airbases For Airline Rights Seen

The State Department is reported to be seeking an arrangement to trade off some of our costly global airbase installations for landing rights for U. S. commercial air lines.

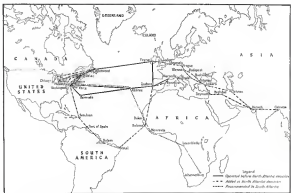
It is understood the department does not want to retain any commercial airports in Europe, Africa or Asia on the theory that maintenance costs would outweigh any advantage that might be gained

It is believed possible that the government may seek to retain a few bases for strictly military purposes, but that decision is up to the War Department which is maintaining a discreet silence.

► **Leased Bases**—In a different category, however, are the bases America acquired in Newfoundland, Bermuda and the Caribbean under the destroyer trade deal. The United States has 99-year rights to maintain all of them, but only for military purposes. Negotiations are now under way to permit these bases to be used for commercial purposes.

ATC Planes Shifted

Air Transport Commission has accomplished the shift to the Pacific of a large number of planes it had used as its "green project" to bring troops to the U. S. from the European and Mediterranean theaters—about 150,000 through June, July and August. The "green project" was discontinued last month.



PAN AMERICAN ROUTES, PRESENT AND RECOMMENDED:

Pan American Airways' routes across the Atlantic will follow the pattern if the Civil Aeronautics Board accepts the recommendation of consensus in the South Atlantic case (dotted line). Two shapes are routes operated by PA before CAA's North Atlantic decision (solid line) and those added by that decision

(dot-dash line). The New York-Lisbon route via San Juan, Port of Spain, Belm, Natal, and Bolinas, is authorized only until CAA finds that it is no longer needed by the national defense set-up. All other routes awarded in last July's North Atlantic decision are for a seven year period.

Periodic Air Express Review Asked For Revenue Allotments

Air Cargo, Inc., examination asserts that totals of income division between airlines and Railway Express Agency warrant action to prevent confusion in distribution base.

An examination by Air Cargo, Inc., of air express revenue and its division between the airlines and the Railway Express Agency reveals totals which "obviously" warrant periodic review "if the bases (of distribution between the two) are to remain free from confusing interpretations."

↑ **Block 1932.** According to an Air Corps survey, gross air express revenue aggregated only \$35,178, of which the airlines took 36.2 percent, or \$13,833, while Railway Express Agency gathered for compensation \$17,375, or 49.4 percent. The remaining 14.7 percent, or \$5,170, represented out-of-pocket Railway Express Agency expense.

↑ **Growth Ratio—By 1935,** air express revenue reached a gross of \$9,919,875. Of this total, the airlines' share was 63.1 percent, or \$6,278,937, while Railway Express Agency received for compensation \$312,666, or 3.1 percent. RKA's out-of-pocket expense that year amounted to \$459,712, or 4.6 percent.

Through the war years, an express business expanded greatly until in 1943 gross revenue reached the staggering figure of \$18,999,000.

The payments to the airlines in

1943 were 72.9 percent of the total, or \$8,604,257. Railway Express Agency, on the other hand, collected for compensation 38.4 percent, or \$1,144,388, while out-of-pocket expense took the balance of \$1,845,530, or 16.7 percent.

Reconciliation.—For the 17-year period 1927-1943, air express revenues aggregated \$38,676,849, of which payments to airlines were 70.9 percent, or \$25,866,790, and compensation to Railway Express Agency was 19.2 percent, or \$3,739,100; out-of-pocket expense was 10.9 percent, or \$6,887,759.

As Air Cargo points out in its study (Railway Express Agency "Pickup and Delivery Operations"), the amounts involved, until recent years, were incidental to both airline and Railway Express Agency operation, and the minor adjustments necessary from time to time did not involve substantial amounts of money.

The report stresses, however, that with the increase in volume, the methods of distributing the revenue between the airlines and Railway Express Agency need careful consideration.

Table 1 shows air express revenue and its division between airlines and BEA.

Year	Gross Net Revenue Expenditure	Parents Income Expenditure	Date of Period Revenue Expenditure	E.F.A. Comparison Ratio
1950	10,149.18	14,533.22	1/1/50-31/3/50	0.693
1951	10,210.18	15,077.17	1/1/51-31/3/51	0.677
1952	10,141.45	15,261.50	1/1/52-31/3/52	0.665
1953	10,275.10	15,311.10	1/1/53-31/3/53	0.671
1954	10,275.10	15,311.10	1/1/54-31/3/54	0.671
1955	10,275.10	15,311.10	1/1/55-31/3/55	0.671
1956	10,275.10	15,311.10	1/1/56-31/3/56	0.671
1957	10,275.10	15,311.10	1/1/57-31/3/57	0.671
1958	10,275.10	15,311.10	1/1/58-31/3/58	0.671
1959	10,275.10	15,311.10	1/1/59-31/3/59	0.671
1960	10,275.10	15,311.10	1/1/60-31/3/60	0.671
1961	10,275.10	15,311.10	1/1/61-31/3/61	0.671
1962	10,275.10	15,311.10	1/1/62-31/3/62	0.671
1963	10,275.10	15,311.10	1/1/63-31/3/63	0.671
1964	10,275.10	15,311.10	1/1/64-31/3/64	0.671
1965	10,275.10	15,311.10	1/1/65-31/3/65	0.671
1966	10,275.10	15,311.10	1/1/66-31/3/66	0.671
1967	10,275.10	15,311.10	1/1/67-31/3/67	0.671
1968	10,275.10	15,311.10	1/1/68-31/3/68	0.671
1969	10,275.10	15,311.10	1/1/69-31/3/69	0.671
1970	10,275.10	15,311.10	1/1/70-31/3/70	0.671
1971	10,275.10	15,311.10	1/1/71-31/3/71	0.671
1972	10,275.10	15,311.10	1/1/72-31/3/72	0.671
1973	10,275.10	15,311.10	1/1/73-31/3/73	0.671
1974	10,275.10	15,311.10	1/1/74-31/3/74	0.671
1975	10,275.10	15,311.10	1/1/75-31/3/75	0.671
1976	10,275.10	15,311.10	1/1/76-31/3/76	0.671
1977	10,275.10	15,311.10	1/1/77-31/3/77	0.671
1978	10,275.10	15,311.10	1/1/78-31/3/78	0.671
1979	10,275.10	15,311.10	1/1/79-31/3/79	0.671
1980	10,275.10	15,311.10	1/1/80-31/3/80	0.671
1981	10,275.10	15,311.10	1/1/81-31/3/81	0.671
1982	10,275.10	15,311.10	1/1/82-31/3/82	0.671
1983	10,275.10	15,311.10	1/1/83-31/3/83	0.671
1984	10,275.10	15,311.10	1/1/84-31/3/84	0.671
1985	10,275.10	15,311.10	1/1/85-31/3/85	0.671
1986	10,275.10	15,311.10	1/1/86-31/3/86	0.671
1987	10,275.10	15,311.10	1/1/87-31/3/87	0.671
1988	10,275.10	15,311.10	1/1/88-31/3/88	0.671
1989	10,275.10	15,311.10	1/1/89-31/3/89	0.671
1990	10,275.10	15,311.10	1/1/90-31/3/90	0.671
1991	10,275.10	15,311.10	1/1/91-31/3/91	0.671
1992	10,275.10	15,311.10	1/1/92-31/3/92	0.671
1993	10,275.10	15,311.10	1/1/93-31/3/93	0.671
1994	10,275.10	15,311.10	1/1/94-31/3/94	0.671
1995	10,275.10	15,311.10	1/1/95-31/3/95	0.671
1996	10,275.10	15,311.10	1/1/96-31/3/96	0.671
1997	10,275.10	15,311.10	1/1/97-31/3/97	0.671
1998	10,275.10	15,311.10	1/1/98-31/3/98	0.671
1999	10,275.10	15,311.10	1/1/99-31/3/99	0.671
2000	10,275.10	15,311.10	1/1/00-31/3/00	0.671
2001	10,275.10	15,311.10	1/1/01-31/3/01	0.671
2002	10,275.10	15,311.10	1/1/02-31/3/02	0.671
2003	10,275.10	15,311.10	1/1/03-31/3/03	0.671
2004	10,275.10	15,311.10	1/1/04-31/3/04	0.671
2005	10,275.10	15,311.10	1/1/05-31/3/05	0.671
2006	10,275.10	15,311.10	1/1/06-31/3/06	0.671
2007	10,275.10	15,311.10	1/1/07-31/3/07	0.671
2008	10,275.10	15,311.10	1/1/08-31/3/08	0.671
2009	10,275.10	15,311.10	1/1/09-31/3/09	0.671
2010	10,275.10	15,311.10	1/1/10-31/3/10	0.671
2011	10,275.10	15,311.10	1/1/11-31/3/11	0.671
2012	10,275.10	15,311.10	1/1/12-31/3/12	0.671
2013	10,275.10	15,311.10	1/1/13-31/3/13	0.671
2014	10,275.10	15,311.10	1/1/14-31/3/14	0.671
2015	10,275.10	15,311.10	1/1/15-31/3/15	0.671
2016	10,275.10	15,311.10	1/1/16-31/3/16	0.671
2017	10,275.10	15,311.10	1/1/17-31/3/17	0.671
2018	10,275.10	15,311.10	1/1/18-31/3/18	0.671
2019	10,275.10	15,311.10	1/1/19-31/3/19	0.671
2020	10,275.10	15,311.10	1/1/20-31/3/20	0.671
2021	10,275.10	15,311.10	1/1/21-31/3/21	0.671
2022	10,275.10	15,311.10	1/1/22-31/3/22	0.671
2023	10,275.10	15,311.10	1/1/23-31/3/23	0.671
2024	10,275.10	15,311.10	1/1/24-31/3/24	0.671
2025	10,275.10	15,311.10	1/1/25-31/3/25	0.671
2026	10,275.10	15,311.10	1/1/26-31/3/26	0.671
2027	10,275.10	15,311.10	1/1/27-31/3/27	0.671
2028	10,275.10	15,311.10	1/1/28-31/3/28	0.671
2029	10,275.10	15,311.10	1/1/29-31/3/29	0.671
2030	10,275.10	15,311.10	1/1/30-31/3/30	0.671
2031	10,275.10	15,311.10	1/1/31-31/3/31	0.671
2032	10,275.10	15,311.10	1/1/32-31/3/32	0.671
2033	10,275.10	15,311.10	1/1/33-31/3/33	0.671
2034	10,275.10	15,311.10	1/1/34-31/3/34	0.671
2035	10,275.10	15,311.10	1/1/35-31/3/35	0.671
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2037	10,275.10	15,311.10	1/1/37-31/3/37	0.671
2038	10,275.10	15,311.10	1/1/38-31/3/38	0.671
2039	10,275.10	15,311.10	1/1/39-31/3/39	0.671
2040	10,275.10	15,311.10	1/1/40-31/3/40	0.671
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2043	10,275.10	15,311.10	1/1/43-31/3/43	0.671
2044	10,275.10	15,311.10	1/1/44-31/3/44	0.671
2045	10,275.10	15,311.10	1/1/45-31/3/45	0.671
2046	10,275.10	15,311.10	1/1/46-31/3/46	0.671
2047	10,275.10	15,311.10	1/1/47-31/3/47	0.671
2048	10,275.10	15,311.10	1/1/48-31/3/48	0.671
2049	10,275.10	15,311.10	1/1/49-31/3/49	0.671
2050	10,275.10	15,311.10	1/1/50-31/3/50	0.671
2051	10,275.10	15,311.10	1/1/51-31/3/51	0.671
2052	10,275.10	15,311.10	1/1/52-31/3/52	0.671
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2114	10,275.10	15,311.10	1/1/14-31/3/14	0.671
2115	10,275.10	15,311.10	1/1/15-31/3/15	0.671
2116	10,275.10	15,311.10	1/1/16-31/3/16	0.671
2117	10,275.10	15,311.10	1/1/17-31/3/17	0.671
2118	10,275.10	15,311.10	1/1/18-31/3/18	0.671
2119	10,275.10	15,311.10	1/1/19-31/3/19	0.671
2120	10,275.10	15,311.10	1/1/20-31/3/20	0.671
2121	10,275.10	15,311.10	1/1/21-31/3/21	0.671
2122	10,275.10	15,311.10	1/1/22-31/3/22	0.671
2123	10,275.10	15,311.10	1/1/23-31/3/23	0.671
2124	10,275.10	15,311.10	1/1/24-31/3/24	0.671
2125	10,275.10	15,311.10	1/1/25-31/3/25</	

Population	Area sq. mi.	Number of Shipments			
		Air		Rail	
		Total	Interstate	Total	Interstate
10,000	1.0	22	0	0	0
100,000	1.0	10,000	10	2,000	10-20 Interstate
1,000,000	1.0	2,000	10	4,000,000	11-20 Interstate
10,000,000	1.0	100,000	100	10,000,000	100-200 Interstate



COCKPIT MOCKUP:

To obtain the pilot's viewpoint on instrument arrangement and placement of controls in forthcoming four-engine equipment, United Air Lines research engineers have built this full-scale mockup of a flight deck. Pilots are asked to express their preferences in lighting, visibility, cockpit heating and types of seats, also.

Another interesting observation made in the Air Cargo study is that the rate of increase for air traffic in cities ranging from 10,000 to 5,000,000 population is the reverse of that for rail traffic, a tenfold increase in population yielding 18 times more air express compared with 10 1/2 times for rail express.

The rail express figures, according to Air Cargo, probably are a truer reflection of the basic trend because of its having become better stabilized throughout the years. The air express figures would reflect smaller development of business which has taken place in the less densely populated areas.

Table II shows the number of air and rail express shipments in relation to population for the month under survey.

Among other conclusions reached by Air Gauge in the study under discussion were: The present "per shipment" basis for measuring cost and performance is not a logical premise for future planning; advertising and sales promotion are items normally included in sales, rather than operating expense; and volume increases with the size of the city, but the range of variation for cities of the same size was wide enough to justify close examination of the underlying economic factors and operating practices which cause such variation.



TCA RADAR:

Trans-Canada Air Lines is experimenting with a Royal Canadian Air Force radar installation, of which the rotating semi-cylindrical antenna is shown above, to determine possible penetrations via commercial transport operations on blind landings. The device permits detection of approaching aircraft in an 18-mile radius. Tests are being made at Winnipeg in co-operation with the RCAF and National Research Council, Ottawa.

New Iowa Feederline Seeks Louisiana Route

Operation of a feeder airline which hopes to serve several points between Sioux City, Iowa, and Shreveport, La., is proposed by Des Moines Gulf Airways, Inc. which recently filed articles of incorporation with the Iowa Secretary of State.

The articles set \$200,000 as authorized capital and named May Arnold Fletcher, Jr., of Sedalia, Mo., now with the AAF, as president, his wife as secretary, and Stephen Robinson, Des Moines attorney, as vice-president.

F-CAB Request—Johnson says the firm will seek Civil Aeronautics Board authorization to operate in both interstate and intrastate commerce. Eight-place passenger ships will be used, of a make and design not yet decided. None structure and operation costs will be disclosed after CAB hearing.



Asiatic Operations Planned For TCA

Canadian line to operate route across N. Atlantic to Russia; China; Dominion ball equipment sought

Canada's government-owned Trans-Canada Air Lines will inaugurate a route across the North

Pacific to Russia and China, H. J. Symington, TCA president, disclosed a few days ago at an acceptance ceremony of the line's first converted DC-3.

EAL Conversion

EAL Conversion

Some conversion work for Eastern Air Lines has been handled by the Canadian government's aircraft factory at Montreal, Canadair Ltd., among other conversion jobs.

Capt. Elsie Kichenbacher, EAL president, was in Montreal late last month to accept the first converted plane, a DC-3 type ship, at the same time that the factory turned over the first converted DC-3 to Trans-Canada Air Lines.

China was revealed in Brynmount's review of TCA's international plans, which include service across the Atlantic, new operating on daily commercial basis, service to Australia and New Zealand via Hawaii, and to the West Indies and South America. Date for the Russian service was not definite. FDC-4's service TCA will have a DC-4's built DC-4 aircraft as soon as possible for its proposed international routes, Brynmount said. They are to be built at Canadian Ltd. government-owned factory

"We want to provide facilities

for people who want to fly," he asserted, "but we want to do it with Canadian products. There seems to be a general opinion that we have our places elsewhere than

To date all planes used by Trans-Canada have been bought in the United States. The DC-4 aircraft will be the first Canadian-built aircraft to be used by the company.

First Conversion—The first DC-3 was accepted at ceremonies, Sept. 22, at Montreal. It is the first of 10, three of which were bought from U. S. surplus, and seven ordered new from Douglas Aircraft Corp. The plane accepted is the first of three surplus ships converted at Canadair Ltd. It and the other DC-3 types will be used on runs from Toronto to New York and Windsor, and later to Chicago and Cleveland.

CAL Maintenance Job

Transport military planes requiring maintenance work at Denver are being serviced by Continental Air Lines under contract with the Military Air Transport Service Effective early this month, the contract employs about 150 people, of whom virtually all came from CAL's Denver modification center, where work ended Aug. 31. A large part of the craft handled under the new contract are transport planes being used in troop redeployment.



TCA Gets DC-3: First converted DC-3 recently was received by Trans-Canada Air Lines for international utility routes. Features show crowd present at acceptance ceremony at Montreal and closeup of Reconstruction Minister C. D. Howe (left), who has jurisdiction over civil aviation, and H. J. Symington, TCA president.

Consolidation Case Seen Policy Mould

Outcome of American, Mid-Continent merger considerations before CAB believed key to permanent U. S. airline pattern.

The Civil Aeronautics Board's decision in the proposed merger of Mid-Continent and American Airlines will go beyond the immediate issue of whether these two systems should be consolidated, in the opinion of some observers, to point the way to the permanent air transport pattern for the entire U. S.

These sources expect the decision to determine whether future expansion will follow the course already marked in the growth of existing lines, or will mean a shift to a pattern of six or eight big systems, represented by perhaps 50 to 75 feeder lines and 300 or 400 fixed base or charter operations. Approval of the merger would indicate the latter.

Opinion Test—The airlines' feelings in the matter may be apparent from the American-Mid-Continent proceedings before the board reaches a decision. Other merger possibilities have been discussed in airline circles. How sincere this discussion is, and what shape it has reached, will be evident from the number and nature of protests against the current proposal.

If the board overrules objections and approves the merger, others

undoubtedly will follow. Some airline officials believe that many of the smaller certificated airlines, anticipating tough post-war competition with the big carriers, are waiting until they think they can brand a big price before they become party to a merger. That time, they add, has almost come.

American feels that the consolidation in proposals will not disturb the balance between the airlines as it exists today. The point is that that major rival AA would be going into through acquisition of Mid-Continent's system, such as Minneapolis-St. Paul, Omaha, Des Moines, Kansas City and New Orleans, already now served by lines that are in competition with American. Furthermore, American avowedly is going out after the mass transportation business. Plans already are being made to lower fares below the 4½ cents a mile they reached with the latest reduction.

Directional Doubts—The fact that Mid-Continent's system runs north and south, while American's extends from coast to coast, may be an obstacle to consolidation and undoubtedly will be stressed by competitors opposing the move. Acquisitions previously approved by the Board—such as that of Metropolitan Airlines by TWA, Eastern Air Lines by Western Air Lines, and Mayflower Airlines by Northeast Airlines—have involved systems operating in the same general direction.

Seattle Organizes Air Route Demand

Probably the most intensely organized campaign of its kind has been organized in the Pacific Northwest to prevent the bypassing of Seattle as an airport of entry on U. S.-Orient routes.

Business leaders and civic organizations are protesting the proposed Grant route suggested by Civil Aeronautics Board examiners [Aviation News, Sept. 3] west from Chicago through Central Canada and Alaska, and have sent vigorous appeals to the Civil Aeronautics Board through the recently organized Pacific Northwest Oriental Airlines Committee.

Line Charge—Northwest Airlines has charged that the examiners "failed to recognize the vital importance of Seattle as a gateway for Oriental traffic" in exceptions to the examiners' report, which recommended denial of Northwest's application for a route from Seattle to Anchorage, Alaska.

Essentially, Seattle seeks trade advantages to accrue from possession of direct air service to the Orient, and wants to maintain the sky in the city's shipping slogan "Gateway to the Orient."

Christy Thomas, Seattle Chamber of Commerce manager, heads the steering committee of Pacific Northwest interests seeking Seattle-Orient air routes, and support of the movement has become extensive. Gov. M. C. Walgren is due in Washington, D. C., Sept. 29 to fight the Seattle by-passing personally. The powerful AFL-Tommies Union, dominant in the Seattle area, is supporting the fight. Airlines are being made to raise a \$200,000 "chit" to campaign for assignment of routes to Seattle.

Hearing Seen—Senator Warren G. Magnuson has indicated the Pacific Northwest Committee that CAB will give the city of Seattle and all interested parties a hearing, probably on Oct. 5.

Vancouver Charter Line

Application to operate a non-subsidized charter air service from Sea Island, Vancouver, B. C., has been made to the Canadian Air Transport Board, Ottawa, by Spilsbury & Hepburn Ltd., Vancouver. The company proposes to serve, during fishing and mining seasons on the British Columbia coast.

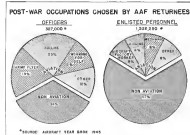


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GENERAL ELECTRIC



Prepared by the Civil Aeronautics Administration's aviation information and statistics service, the above chart uses graphic representation to reveal the AAF's survey of postwar job choices of AAF returnees, based on total personnel figures recorded by the Aircraft Industries Association Aircraft Year Book, for 1945.

RETRIEVER PLANE

Ship-of-all-work

War experience has proved American-made planes outstanding in many respects, but it is in recognition that our aircraft lead the world. Now the top for toughness among U.S. ships in the little-known IJF-6, Columbia Aircraft's aptly-named "Dunkle Duck."

Employed for scouting, reconnaissance, photographic observation, plasma delivery, rescue work, and numerous other claims, the Duck is ship-of-all-work. The plane is versatile, durable, and able to land and take off where most planes can't. It is in rescue work that the Duck was its launch.

70 Yards for Landing

One Duck landed in smothering rain.



modest size makes with waves breaking over its top wing, then took off without a quaver. Another landed on a roof-rimmed 70-yard inlet, took off cross-wind made 200 feet, despite a severe pounding.

Best example of Duck durability is the IJF-6 that was being tested by a



surface slip in high seas. The low-lift period tests, waves filled the cockpit, submerging the plane's lower wing. For their landing was impossible, the Duck was abandoned.

Now day the Duck was still about, had to be sunk by shells from a warship; two lives were required to make it go down.

Scouting Wounded from Japs

Ducks have added to its "unusable" loadings in big factories, while coast fighters drilled overhead. Often, the Duck took the air again with a full load of wounded, sometimes with an evaded landing in the wings.



No thing of beauty on the ground, the amphibious Duck becomes oddly impressive in flight. Over dark oceans, it has functioned effectively as a scout plane, enemy ship and dependable bearer of burden.

It was a Duck that found the Nazi weather station in Greenland. Another Duck, operating out of Henderson Field, Guadalcanal, picked no less than twenty downed pilots from the sea.



For its many reasons, word came from the Pacific that the amphibious but rugged amphibian had earned a new nickname, "The Beloved Duck."

Justly proud of the greatest performance of the Duck, Columbia Aircraft workers are now engaged, under Navy supervision, in building a new amphibious, larger, with increased range and greater load capacity. The new men and women who built the sturdy Ducks are building the new and even more versatile plane. And the same enthusiasm which has led the Duck a head for rapid progress and reliability with distinction Columbia's new workers at the ex-Columbia Aircraft Corporation, Valley Stream, N. Y.

New WAL C-54's Planned By Douglas

Western Air Lines and Douglas Aircraft Co., soon will make a joint announcement of Western's order for three C-54 passenger transports to be built on Douglas' production line at Santa Monica. Douglas is known to have been negotiating with several airlines for new commercial C-54's to go into production as Army production closes this month. Among them, besides Western, are National, Northwest, Colonial, and four foreign lines.

Advantage Seen—Officials at WAL anticipate first-of-year delivery and an even break if not a slight edge on other airlines which will be flying converted Army C-54's when modifications have been completed. Should Civil Aeronautics Administration crews complete the Los Angeles-Denver installation of intermediate landing fields, beacons and VHF radio ground equipment, by the time the newly ordered planes are delivered, Western may be expected to use the four-engine equipment immediately to open passenger service between the two points.

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Mrs. Calkins - Baby Photographer

ART FACTORY FORDS

Chasing the sun

You left the East Coast at one o'clock after a good lunch. Now, tucked into a big, cushioned easy chair, you watch cloud patterns shift on the green and gold checkerboard of Ohio farmed below.

You're flying high, where the air is smooth, yet the atmosphere in the big Boeing Strato-cruiser is held in the same comfortable pressure as in low levels.

You and some five other passengers are traveling at 340 miles an hour—yet the sound of four 3100-horsepower engines is only a low hum in the insulated cabin.

The rotating ribbons of the Mississippi glaze beauty you, and then you're over the wide prairie. You read a little, sip a little. Soon you're looking down on

snow-capped mountains. "How about a rubber lunch, down in the breeze?" your neighbor suggests.

At the foot of a slight airway you enter a roomy, comfortably furnished saloon, where a congenial group has gathered. When the West Coast comes into view it's all afternoon. You've gained three hours on the way that hangs high above the Pacific as the great plane glides smoothly to a landing!

This is no Jules Verne fantasy. It may be your own experience before long—at a fare even lower than present rates, for the Strato-cruiser is capable of carrying a greater payload at a lower operating cost than any previous transport.

The aerodynamic advancements built into the Strato-cruiser have been thoroughly worked-out in the B-29 Superfortress and on the results of Boeing's long experience in the design and development of other four-engine aircraft such as the Flying Fortress, Stratofortress and Clipper. The C-57, military version of this first supertransport of the future, is going into the air today!

With victory won, the case still in design, engineering and manufacture which has established Boeing leadership in the big bomber field will bring you the Strato-cruiser and other aircraft in the near future. You can be sure—if it's built by Boeing—it's not in front!

DESIGNED BY THE B-29 SUPERFORTRESS • THE FLYING FORTRESS • THE NEW STRATOFORTRESS
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SHORTLINES

- American Airlines, studying passenger service needs, reports increasing demand for newspapers at its terminals, particularly between 9 a.m. and 10:30 a.m. Operations managers at airports have been advised to add concessionaires in providing them.
- Eastern Air Lines has agreed a new tie-in and ticket office in 302-2221.
- Northwest Airlines has published a new international air express tariff establishing cargo rates between Texas points and cities in Mexico.
- Colonial Airlines reports inflated net operating profits in August of more than \$50,000 after depreciation and other charges but before taxes. Number of passengers carried between New York and Montreal was 63.2 percent higher than in August, 1944. Mail and express percentage also reached new highs.
- Delta Air Lines plans to cut express rates approximately 13 percent, from 70 cents to 61.4 cents per ton mile, in mid-November.
- Eastern Air Lines reports on August operations, compared with the same month last year, show these 30-month revenue passenger carrier, up 25 percent; passenger revenue, up 62 percent; average passenger miles, up 53 percent; revenue passenger miles, up 36 percent.

Northwest Airlines set a 73-year record with its August traffic survey, which showed 345 percent more revenue passengers carried than in August, 1944. Revenue passenger miles went up 317 percent, and the system load factor of 52.75 percent was an all-time record for Northwest. Revenue passenger miles for the first eight months of this year were 116 percent above those for the same period of 1944.

Northwest Airlines is planning construction of a new type hangar at Idlewild airport, New York, where it expects to be landing sometime next year. The hangar will cover 65,000 sq. ft., and be so built that its width can be increased easily. Greatest ceiling height will be near the door. . . . Weather studies will be conducted by Northwest this winter at Mt. Washington, New Hampshire, with special attention to icing.

Pennair, which showed a 120 percent gain in passenger miles operated and 204 percent gain in express and mail carried, for the first six months of this year compared with the same period last year, recently celebrated its 11th year of scheduled operation along the west coast of South America to Buenos Aires.

The American Airways Latin American division rates month-to-month traffic gains and attributes them to additional equipment and greater utilization. The division reports its Clippers operating at 92.4 percent capacity during the first half of 1950, an increase of about 10 percent over the comparable period of 1949. Passenger miles for PAA's entire system for the first six months of this year totaled 77,000,000, with more than 5,000,000 miles of express and 5,000,000 of air mail carried.

The line was to complete, last weekend, a four-week interruption of service to Central America, said to be the first of its kind since the end of the war, with a group of Indianapolis residents on board.

PAA's August operating revenues reached a new high for a single month of \$1,523,023. Comparative figure for July was \$1,196,340; for August, 1949, \$734,049. Net profit for the first six months of this year was \$185,341, after \$800,000 for federal income and excess profits taxes, compared with \$275,243 in the first eight months last year after \$257,000 for federal income taxes.

Trans-Canada Air Lines has taken delivery on the first of 18 DC-4's, of which the second and third are to be delivered this month. The first three are former Army transports. The remainder are to be built to TCA specifications. The Douglas will supplement the line's Liberators and other Lockheed-built planes on its transatlantic service.

United Air Lines passenger miles for August were 35 percent above

the "Age of Flight—1950 Edition"—the complete history of Aviation—were ever written; the name Shell would appear consistently as a leader in Aviation Fuel development.



IN THE TEST TUBES OF TODAY — TOMORROW'S AVIATION HISTORY

Habitually, history repeats itself. Factual data suggest today lead to dramatic conclusions on the relationship of fuels to the planes of tomorrow. For example . . .

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Yesterday's Fuel in Today's Plane
That's bad too! Modern high compression engines would break down with old-time low-octane fuel . . .

Today's Fuel in Today's Plane
Fuel companies keep pace with plane designers. Maximum efficiency from lighter engines using more powerful fuel . . .

Tomorrow's Fuel in Tomorrow's Plane
Shell scientists are now exploring new ways to release and record of power . . . jet propulsion.

These basic conditions tell us that inevitably the planes and fuels of tomorrow must be "married." *Fuels of tomorrow involve problems well come from the research lab—*

1. first gave the Army the "smoking"



2. showed other refineries how to utilize Currier—in time of emergency—to step up 100 octane production
3. developed jet engine fuel to meet engine fuel greater volume of anti-knock components
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The PAC Looks Ahead

THE PERSONAL AIRCRAFT COUNCIL of the Aircraft Industries Association opens a two-day meeting in Washington today to map plans for the next few months. They will be important months, in which the lightplane industry resumes commercial production after four war years. That long discussed post-war era is here and the industry's acid test is beginning—to bring private aviation to as many thousands of citizens as a competitive, aggressive and progressive group of manufacturers can interest in safe, comfortable, useful and reasonably priced aircraft.

The Personal Aircraft Council in its short history has performed a signal service in uniting to a surprising extent a segment of industry whose members frequently prided themselves on their own individualism and their refusal to face their common problems together. The members of PAC are deserving of public tribute for the unity they have displayed in working together on a program of broad policy matters.

It is particularly noteworthy that the Council as a group has rightly refrained from joining in the field day of predictions as to post-war plane sales. It has realized that before any predictions such as those made by public officials and other individuals could come true, or before personal flying or manufacture of personal planes could attain any real significance, the problem of landing facilities had to be solved.

Therefore, the number one activity has been in pursuing a persistent and consistent national campaign, first, to bring to the attention of all communities, large and small, the absolute necessity of providing a landing facility commensurate with local economic conditions and requirements and, second, in exerting every effort to see that such interest, once aroused, would follow through to the desired conclusion, through personal correspondence with those interested and by reference to qualified governmental and other agencies.

With this fundamental program well underway, the second item of importance in achieving the ultimate goal required patience and unnecessarily restrictive civil air regulations. The Council has been a potent force in a campaign of all interests—manufacturing, selling and consuming—which has begun to show a success which even the most optimistic observers could hardly have expected a year ago.

The third broad policy on which the Council united in its national effort concerns the field of aviation education. While the effort here has been less active than might have been hoped for, the Council still has kept close touch with developments and initiated

several important activities, including a series of simply written ABC articles on "Post-War Flying in Your Home Towns" which is being published weekly by almost 1,300 newspapers.

The success of the Council during the years when all attention was focused on military achievements of the aircraft industry sets an encouraging precedent for the future. With the war won, and only commercial horizons ahead, the Council now has an enviable opportunity to simplify its efforts to carry the story of personal aviation to the grassroots and to study the manufacturers in a coordinated general program which each can supplement according to his own requirements.

Prevent Reckless Flying

RECKLESS AND LOW FLYING is increasing at an alarming rate in the opinion of state aviation officials. Unnecessarily, flyers are endangering not only their own lives but those on the ground. Public opinion in many areas is showing ominous signs of crystallizing against all private aviation. Protests are always directed to the nearest fixed base operator, who bears the brunt of criticism. This rising tide of public indignation in some states is reaching the point of petitions which result in shutting plans for new private airports by their would-be neighbors.

While matters for lightplanes is an obvious answer to the main problem, the reckless pilot who persists in bunting the ground will be a public menace long after planes become silent. The over-worked CAA inspectors and state aviation agencies need the utmost cooperation of the fixed base operators in what should be a national educational program for pilots, especially for discharged Army and Navy flyers whose exuberance in small low-powered Greasheppers appears to be extended only by their inexperience in lightplane characteristics.

As pointed out by William L. Anderson, executive director of Pennsylvania State Aeronautics Commission, fixed base operators who fail to warn sternly all pilots operating from airports can expect the next step to be action by state and local police forces. These groups have little understanding of aviation and their active surveillance of air safety would set private flying back immeasurably. But the problem is serious, and is becoming worse. The operators of airports, by their control of services for local flying, can and must take the initiative in stamping out careless reckless flying. If they do not, they will find their business threatened not only by licensed aviators from careful pilots, but by constantly public opinion to close the local airports completely.

ROBERT H. WOOD

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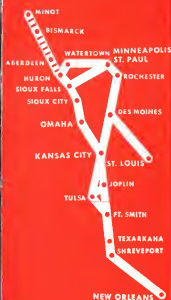
The importance of Stromberg's constant research in all phases of carburetion improvement is now equally obvious, for it is no exaggeration to state that because of the knowledge and skill of Stromberg engineers—engine problems have—and aircraft gas lines longer than ever before.

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Stromberg

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Bendix Aviation Corporation, South Bend 35, Ind.





Serving the Heart of America

MID-CONTINENT Airlines' recent extension of service to New Orleans now links the producing sections of the great middle-west with one of the world's busiest seaports. The route is flown with 21-passenger Douglas DC-3 airliners and will be of vast importance in the postwar era, as well as in the immediate development of America's might.

Now approaching its tenth birthday, progressive Mid-Continent Airlines has for years flown its planes exclusively with *Texaco Aircraft Engine Oil* and *Texaco Aviation Gasoline*. We take pride in our long association with Mid-Continent and in the fact that Texaco

products are so outstandingly preferred by so many of America's leading airlines that —

More revenue airline miles in the U.S. are flown with Texaco than with any other brand.

A Texaco representative will gladly help you select the most suitable lubricants and fuels for your requirements . . . and furnish suggestions for the improvement of maintenance practices. Texaco Aviation Products are available through more than 2300 Texaco distributing plants in the 48 States. The Texas Company, *Aviation Division*, 135 East 42nd Street, New York 17, N. Y.

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2. These instructions require that only rustproofing materials meeting Government specifications be used.
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FOR THE AVIATION INDUSTRY

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